Climate Change as Metaphor & Catalyst

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The Deeper Meaning and Potential of an Environmental Crisis

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VRIJE UNIVERSITEIT

Climate Change as Metaphor & Catalyst

The Deeper Meaning and Potential of an Environmental Crisis

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad Doctor aan
de Vrije Universiteit Amsterdam,
op gezag van de rector magnificus
prof.dr. V. Subramaniam,
in het openbaar te verdedigen
ten overstaan van de promotiecommissie
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door

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promotor: prof.dr. Tj. de Cock Buning

My work and this book are dedicated to my Brouwer Boys…

…who lived through it all

PhD candidates often speak of the dissertation process as a personal journey – a process of highest highs and lowest lows, in which one's professional experience, academic knowledge, and deepest personal convictions come together in one long intellectual struggle to produce the highest of academic demands: truly new knowledge, to add to the centuries of collective academia proceeding it. My journey was no different. At an academic level, this dissertation explores how two significantly different worldviews construct the problem of and the solutions for anthropogenic climate change. At a personal level, this dissertation was a personal journey through the worldview in which I was raised, through a worldview I believed held all the answers, into a more nuance understanding of what each offers to the struggles of human experience. This journey started when I was seven years old, when my family moved from the predominately white suburbs of California to Kuala Lumpur, Malaysia. While our expat life there was privileged, this early encounter with a culture so vastly different to my own sparked, not only a lifelong interest in other cultures, but struck the first note of dissonance that perhaps our way of viewing the world was not the only way.

Completing a PhD dissertation has been compared to childbirth. Both bring relief, joy, and a touch of sadness; both sharply end one phase and thrust the bearer immediately into another; and neither would be possible without the contributions of all who have come – and gone – before us. My journey would not have been possible without the support of my family, friends, mentors, advisors, readers, and PhD Club. A special thank you to the Butterfly Café at Artis for an inspiring place to work, coffee and the paper upon which I wrote the first words of this book.

Our identities are shaped by the many people, stories and experiences we encounter throughout our lifetimes. These four people shaped mine.

- My mother, whose awe for the beauty and complexity of the natural world inspired my own
- My father, who taught me all things were possible if you tried hard enough and had a plan
- My paternal grandfather, a farmer and son of a farmer, who turned down a college scholarship in order to fulfill his familial duty, yet demanded in turn that his own children attend university
- My maternal grandmother, who believed me capable of absolutely anything

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Summary

Despite broad scientific consensus on the existence and dangers of anthropogenic climate change, the United States – the largest historical emitter of the greenhouse gases, which have accelerated climate change in the past century (Baumert et al. 2005) – and the global United Nations institutions tasked with protecting the environment have been unable to effectively address an environmental crisis, which would seem to threaten humankind's very survival. Some argue that *environmental crisis fatigue* (Williams 2002: 500) has led to apathy and inaction; others argue that a relentless campaign to breed uncertainty about climate change has undermined public trust in science; while others argue that the economic downturn has pushed climate change into the background. Yet, none of these arguments are supported by empirical evidence.

Prior environmental crises, such as the hole in the ozone layer and acid rain, have been effectively addressed in the past within a much shorter time frame from discovery to solution. Despite sustained, well–funded 'denier' campaigns, nearly three–quarters of Americans still see scientists – and science related organizations – as the most trusted sources of information about global warming. Yet, in the midst of the greatest economic downturn since the Great Depression, a solid majority of Americans remain committed to addressing climate change (Yale Project on Climate Change 2010). In November 2010, California voters, amidst a dismal economy and high unemployment, soundly rejected a measure, which would have halted the implementation of its landmark Global Warming Law (AB32). Since California's environmental laws are typically harbingers of national laws[1], this vote was largely seen as a litmus test for public support of national climate law, even in a bad economy. Furthermore, two–thirds of Californians con-

[1] For example, air pollution (California Clean Air Act of 1988 led to the federal Clean Air Act amendments of 1990), fuel standards/air pollution (Motor Vehicle Air Pollution Control Act amendment to the Clean Air Act 1970 and later California's Motor Vehicle Greenhouse Gas Emissions Standards of 2005 led to federal changes to standards in 2009), and clean water laws (Porter–Cologne Act of 1970 was the model for the federal Clean Water Act).

tinue to support AB32, and sixty percent support a carbon tax[2] (Public Policy Institute of California 2010), further debunking the excuses of apathy and lack of salience. Why, despite broad public consensus on the science, risks, and policy to address climate change, has it not been effectively addressed? The research presented herein sought answers to two primary questions:

I. What does the development of and intense public interest around anthropogenic climate change say about the United States? (Climate Change as Metaphor)

II. How might this interest catalyze substantive change in the United States? (Climate Change as Catalyst)

In his work on environmental political discourse analysis, Hajer (2006: 6) found: "The analysis of discursive constructions such as narratives, story lines or metaphors is especially powerful when done in the context of the study of the social–historical conditions in which the statements were produced and received". Thus, answers to my first research question was sought from an exploration of the historical development in the United States of the national, socio–cultural, and religious discourses of anthropogenic climate change. My research, and the resulting dissertation presented herein, first looks at how notions of culture, universalism, power, and history shape worldviews[3], which, in turn, construct the political discourse of environmental issues and solutions.

To answer my second research question, I looked at the construction and solutions offered by alternative worldview and explored parallels between

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[2] A tax (instead of a carbon unit) would be administered through the government instead of traded in a carbon market.

[3] In this dissertation, I use the terms 'paradigm' and 'worldview' interchangeably as the focus of study. Even Pirages and Ehrlich themselves, who are widely known for their work on paradigms, define a paradigm as "the collection of norms, beliefs, values, habits…that form (a) world view" (1974: 43). Both because paradigm is a widely overused term, and because I focus on the body of research on worldviews more common in cultural studies (Hall 1976, Singer 1987), socio–biology (Clark 2002,Wilson 1975, 1978), philosophy (Næss 1973), and ecology (Cramer 1998, Devall & Sessions 1985), I will use the term worldview more often throughout this dissertation. The *dominant social paradigm* identified by Pirages and Ehrlich (1974) mirrors the ideas of the dominant worldview outlined by Devall and Sessions (1985) and Cramer (1998), while the *new environmental paradigm* (Dunlap et al. 2000, Dunlap & Van Liere 1978) mirrors that of the deep ecology worldview (Cramer 1998, Devall & Sessions 1985).

it and the universal quests of humankind identified by scholars of anthropology (Boas 1911 (1938), Douglas and Wildavsky 1982, LeVine and Campbell 1971/1972, Mead 1956, 1970, Textor 1967), comparative literature and religion (Campbell 1949, 1988, Smith 1958), psychology (LeVine and Campbell 1971/1972), political science (Douglas and Wildavsky 1982), and biology (Clark 2002, Wilson 1978, 1984, 1999). Finally, I looked at the type of policies this alternative worldview may inspire and how they might engage citizens of the United States in addressing climate change.

To go beyond the current discourse analysis of climate change as a scientific or social phenomena, my academic inquiry relied upon Schmitt's (2005: 358, 374) *Systematic Metaphor Analysis*, which creates a "procedure for the reconstruction of metaphorical concepts" for researchers with knowledge and experience in the cultural context. My *cultural metaphorical analysis* followed the iterative, heuristic methodology defined by Motterlini (2002) – initial engagement, immersion, incubation, illumination, explication, creative synthesis, and validation – to uncover the deep frames connecting discourses and the dominant worldviews that inform these deep frames. Climate change was analyzed both as metaphor – for the dominant social paradigm – and potential catalyst to make a shift towards an insurgent paradigm.

My research led me to conclude that, in contrast to prior environmental crises, climate change is vastly more complex and echoes an ages–old prophesy of climate catastrophe. It is not a stand–alone environmental issue but one tied – discoursively and ecologically – to other social and environmental concerns. It has been dramatized and localized by global media focused on profit–making sensationalism. Most importantly, though, climate change has proven itself unsolvable within the same western *dominant social paradigm* (Pirages & Ehrlich 1974: 43) of centralized, free market based technology, decision making, and public policy instruments, which addressed prior environmental crises. The inability of this paradigm to address climate change – especially in light of a confluence of crises in the economy, food, health, and energy in the past few years – has allowed a different worldview, an *insurgent discourse* (Cox 2010: 64) or *new environmental paradigm* (Dunlap et al. 2000, Dunlap & Van Liere 1978) to gain credibility. The longer the *dominant social paradigm* is seen as incapable, the longer this insurgent paradigm has had to make a case (van Ginneken 2003). That this new paradigm also answers universal quests for meaning, purpose, nature, and community makes it that much more potent. The primary lessons learned along this inquiry were:

I. The culturally-relative *dominant western worldview* (Devall & Sessions 1985, Cramer 1998) or *dominant social paradigm* (Pirages & Ehrlich 1974) has been universalized by linking truly universal values, such as freedom, democracy, and peace, with very western goals of free market capitalism and economic growth, individualism as freedom, and happiness as the pursuit of material wealth (Korton 1995, Rothkopf 1997, Soros 1998, Tomlinson 1991) – and institutionalized within international organizations, such as the World Bank, IMF, WTO, OECD, and sections of the United Nations (Brecher & Costello 1994, Godden 2000, Kluckhohn 1950, Parsons & Smelser 1956).

II. This dominant, institutionalized western worldview led to anthropogenic climate change, and a host of auxiliary crises, and how the solutions for it continue to be framed within the same worldview.

III. Despite massive efforts to the contrary, a marginalized, yet millennia–old Gaian worldview has survived because its core tenets mirror the universal quests of humankind for meaning, purpose, community, and contact with nature.

IV. Climate change has become a metaphor for the failure of the dominant western worldview to address the social and environmental issues identified herein and how this failure – along with a growing awareness that something is just not right in our western system – is catalyzing social change towards a Gaian worldview, which seeks to offer fundamentally different alternatives.

Ultimately, these findings are not restricted to the issue of climate change. Climate change offers a richly illustrative case study of how the current dominant social paradigm shapes and limits public debate and the solutions considered in order to address global crises and how insurgent paradigms, in turn, gain credibility so long that the dominant paradigm is unable to address a crises. Reconciling what appears to be two contradictory paradigms – or worldviews – lies, not in simply shifting the surface frames of their associated lifestyles[4], but in breeching the chasm between the ingrained beliefs which underlie them.

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[4] Lakoff (2006a) distinguishes between surface frames, which are often associated with marketing spin, and *deep frames,* the "basic frames that define a moral or philosophical worldview," which can enable major societal change.

Dissertation Overview

For most of the past 100,000 years that humankind has inhabited Earth (Morrison 2006), the human species lived in agrarian or nomadic societies directly affected by natural forces. Even following a few millennia of scattered urbanization, cities and cultivated fields were still seen as vulnerable islands surrounded by a larger and savage nature (McKibben 1989). Although humankind has always suspected it could alter the natural world (Weart 2007), religious songs, prayers, and rituals revolved around natural events, such as weather (Sleeth 2006), which were seen to be outside human control.

However, the western civilization, which has evolved over the past 600 years (Huntington 1993) brought technological and scientific discoveries, which have allowed humankind to increasingly manipulate its own environment. White (1967) points to the plow, developed by late seventh century farmers in northern Europe, as the moment when the relationship of western society to the natural world profoundly changed: "distribution of land was based no longer on the needs of a family but, rather, on the capacity of a power machine to till the earth" (p. 1205). The basis for farming shifted from how much food was needed to how much could be grown.

Accelerated industrialization followed these advancements and, throughout the last couple of centuries, populations increasingly shifted toward urban areas for their livelihoods. Electricity proliferated and fewer farms fed larger numbers of people with no direct involvement in the raising and growing of food. Western societies became less bound and increasingly de–sensitized to natural rhythms. Female menstrual cycles were less synchronized with each other and lunar cycles (Knight et al. 1995, Law 1986), and taste buds became dulled by increasingly processed food (Pollan 2006, 2008, Schlosser 2001). The natural world became a distant wilderness to be revered from afar; a "Utopian memory" (Hajer & Versteeg 2005). After millennia of relative helplessness in the face of powerful and unpredictable natural forces, western civilization came to believe that science and technology could measure and conquer nature like an adversary (Hays 1999 (1959)) and exploit it

like an entitlement (Cramer 1998, Devall & Sessions 1985, Godden 2000).

Yet, as control and exploitation of nature accelerated through the last century, so did concern among westerners about the negative impact of its industrialization on the natural world. Throughout the 20th century, this *ecological dilemma of industrial society* (Hajer 1996: 246) focused on a shifting stream of metaphorical *emblems* (p. 247), such as the ozone hole and acid rain. The search for a solution often invoked a Hollywood–style "hero racing against the ticking bomb to save the world from destruction" (Dicke 2001: 8). In the cases of the ozone hole and acid rain, the "villain" turned out to be a specific set of industrial chemicals, and the "hero" was a *silver bullet*[5] technology, which required no noticeable change in individual or societal behavior.

Ozone Layer: In the mid 1970s, Molina and Rowland (1974, Nobel Prize 1995) published the first proof that chlorofluorocarbons (CFCs), commonly used substances in refrigeration, aerosols, and air conditioning, compromised the ozone layer, which protects humans from the most harmful UVB wavelengths thought to trigger skin cancer (Lima–Bessaa & Mencka 2005). While the findings were initially dismissed by CFC manufacturers, within 13 years, the worldwide 1987 Montreal Protocol on Substances That Deplete the Ozone Layer had been signed. It was subsequently ratified by 191 countries. By 2005, CFC use had plummeted 95 percent (United Nations Framework Convention on Climate Change 2008). The ozone layer is now expected to return to 1980 values (when the ozone layer first started to thin) around 2050 (United Nations Environmental Programme 2007)

Acid Rain: The link between acid rain and sulfur dioxide emissions from coal smoke stacks was made in the 1970s. By 1987, "The 1985 Helsinki Protocol on Long–Range Transboundary Air Pollution on the Reduction of Sulphur Emissions or Their Transboundary Fluxes by at Least 30 Percent" had entered into force in Europe (United Nations Economic Commission for Europe 1987). In 1990, the emissions–trading Acid Rain Program was implemented in the United States by its national Environmental Protection Agency.

[5] Silver Bullets were first introduced in folklore as the only way to kill evil creatures, such as werewolves. Metaphorical silver bullets are simple – usually technical – solutions which easily and cheaply solve a complicated problem.

However, like an audience passively watching an action film, at no point in the story did a broad swath of the general public experience tangible effects of these environmental *emblems*. Furthermore, these abstract and distant – both in time and space – threats were accepted and solved relatively quickly for the general public by specific industrial practices, in collaboration between global scientific, commercial, and public institutions. Each crisis was created as a distant drama and then averted through centralized policy instruments and technologies. While civil society[6] helped raise awareness of the initial crises, it played almost no role in the solutions. Furthermore, when each crisis was "solved", the public generally shifted its attention back to more immediate economic and personal concerns. In the past decade, however, a new environmental emblem has eclipsed prior emblems in its complexity and global reach.

> Anthropogenic Climate Change: A Scientific Phenomena
> "Consensus as strong as the one that has developed around (anthropogenic climate change) is rare in science" — Donald Kennedy (2001), Editor–in–Chief, Science Magazine

While the temperature on Earth naturally changes within rather predictable long term cycles of warming and cooling, it is at a rate that allows the overall climate to sustainably evolve and adapt. This adaptive system has maintained, at least for the last 8,000 years (May 2007), an atmosphere which is conducive, even pleasant, for human existence. Over the last century, however, our planet has been warming at a faster rate than can be explained by natural trends (IPCC 2001, 2007, 2013). This additional warming has been linked to the excessive release of greenhouse gases[7] (GHG) into the atmosphere from increasing industrialization, transportation, and large scale agriculture over the last century.

With the exception of fluorinated gases, GHGs occur naturally and are absorbed by Earth's natural carbon sinks, such as forests and oceans[8]. However, deforestation and increasing acidification of the world's oceans in the latter part of the last century have reduced Earth's ability to naturally absorb GHGs. In short, GHGs in the atmosphere have accelerated at a faster

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[6] Defined by the Centre for Civil Society at the London School of Economics (2004) as "the arena of uncoerced collective action around shared interests, purposes and values."

[7] such as carbon dioxide, methane, nitrous oxide, and fluorinated gases

[8] www.epa.gov/climatechange/emissions

rate than the natural world's ability to absorb them can adapt. The net effect has been that our planet is getting too warm, too fast, and this global warming has caused dramatic changes in climate: "long-term averages of surface temperature and precipitation" (American Meteorological Society 2012).

The widely–cited reports of the Intergovernmental Panel on Climate Change (IPCC 2001, 2007, 2013) have warned that these changes to Earth's climate could alter the atmospheric conditions upon which all humankind depends for its relatively comfortable survival. One oft–cited climatologist, James Hansen (2008), believes that significant, irreversible climatic changes have already occurred. More recent research indicates that the effects of human–accelerated – or anthropogenic – climate change are accelerating at a faster rate than predicted, with less time to respond than estimated just four years earlier (International Alliance of Research Universities 2009). Economists, anthropologists, ecologists, and geographers forecast significant human migration and social upheaval as a result of these changes (Crate 2009, Dounias 2009, Marin 2009, IPCC 2007, 2012, Stern 2006, 2009, The CNA Corporation 2007, Ulloa 2009).

Anthropogenic Climate Change: A Social Phenomena

Fed by unusually broad scientific consensus (Kennedy 2001, Oreskes 2004), extensive research (Hansen 2008, IPCC 2001, 2007, 2013, Stern 2006, Sukhdev 2008), extreme weather events (Ackerman & Stanton 2008), and massive media coverage (Carvalho 2007, 2010), anthropogenic climate change has become the dominant environmental *emblem* of the early 21st century.

Anthropogenic climate change is undoubtedly a complex scientific phenomena, measured and argued in detailed terminology indecipherable to all but the most educated of climatologists; not typical fodder for a *global conversation* (Elliott 2007). However, it is difficult to find any source of mainstream media — print, television or digital — in any given week that fails to mention something related to climate change. Unlike prior *emblems*, climate

change has sustained broad, mainstream awareness[9] (Langer 2006), interest, and consensus (Ereaut & Segnit 2006: 10) around the world. It has become a social phenomena as well (WorldPublicOpinion.org and Chicago Council on Global Affairs 2007). During the summer of 2007, the year credited as the *tipping point* (Gladwell 2000) of public awareness and political will (New Scientist 2007), the world's climate earned massive media coverage, an Oscar, and even a Nobel Prize. In the summer of 2007, a BBC (2007a: 1) World Service Poll found:

> "seventy–nine percent...(of citizens from)…twenty–one countries, (including many of the twenty top carbon emitters[10])…say that human activity, industry and transportation, is a significant cause of climate change,… (and ninety percent) say that action is necessary to address global warming."

Yet, why has a scientific phenomena like anthropogenic climate change sustained such public interest?

Perhaps it is because climate catastrophe has been a common theme throughout past and current mythologies around the world, in which it is seen as a punishment for irresponsible human behavior. Visions of the world ending in flames, floods, and ice include the Nordic Fimbulwinter, Christian Revelations, and even science fiction tales of nuclear wastelands

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[9] Awareness and interest with an issue must not be confused with support for specific policies to address it. Most polls track support for specific policy instruments, such as carbon taxation and cap and trade systems. Support for these policies are more influenced by the nature of the political discourse surrounding the policy instrument itself than acceptance that the issue must be addressed (Hardisty et al. 2008). Other polls rank the relative importance of an issue vis–à–vis other issues (Pew Research Center 2009a). While the relative ranking of a particular issue does change, it does not necessarily mean that the relevance and urgency of the issue itself is in question. For instance, polls which immediately follow terrorist activity show increases in the relative importance of terrorism and safety issues. Immediate danger is seen to be more important than future threats, such as climate change. However, the poll takers often interpret the relative lower ranking of the environment as a sign of lagging public support (Pew Research 2007a). Furthermore, recent data suggests that acceptance of climate change has stayed consistent in the past decade but the wording of the polls themselves can alter the results drawn (Kristel et al. 2012, Skoll Global Threats Fund 2013, Villar and Krosnick 2011). Some polls show concern is rising (Saad 2013).

[10] Based on last official statistics available from 2004 (Marland et al. 2004) in order of total emissions: United States, China, Russia, India, Japan, Germany, Canada, United Kingdom, South Korea, Italy, Mexico, South Africa, Iran, Indonesia, France, Brazil, Spain, Ukraine, Australia, and Saudi Arabia. Of these, Iran, Japan, Saudi Arabia, South Africa, and the Ukraine were not polled.

and dead planets (Weart 2008). Climate change may strike some universal fear inherent in humankind.

Perhaps it is because the climatic effects of a warming planet are so unpredictable and often non–mitigable, disrespectful of human–constructed borders. Although western nations disproportionately contribute(d) to the anthropogenic component of climate change, and less industrialized nations will be more deeply affected (Stern 2006), its transnational nature does not recognize national borders. All humans will be affected in an unpredictable manner, primarily through extreme weather and the resultant conflicts wrought by scarcities of water, arid land, and other natural resources (Ackerman & Stanton 2008, Heinz Center & CERES 2009, IPCC 2012). As one report showed, the east coast of the United States – despite its wealth and political power – will be hit by higher sea level rises than any other coast in the world (Climate Change Science Program 2009). "Solutions for pressing environmental problems cannot be found within the boundaries of the sovereign nation–state, forcing established institutions to take part in transnational networks of governance in which power is dispersed" (Hajer & Versteeg 2005: 182). Westerners can not rely on the same kind of centralized policy and technology, which addressed prior environmental emblems, to protect them.

Perhaps it is because a majority of the world's population recognizes that their own very local weather patterns are changing and becoming more extreme. Around the world, increasingly severe storms, hurricanes, droughts, and flooding are exacerbated by rising water levels along low–lying coast lines, melting polar ice caps, and increasing acidification of the oceans. Instead of the temporal and physical distance from prior emblems experienced by most people, the threat of a changing climate is seen as very real (Zogby 2006). Hurricane Sandy even motivated one key conservative politician to endorse Barack Obama for reelection in the 2012 U.S. Presidential Election (Hernandez 2012) because he was seen as more capable to address climate change. Recent flooding in the U.K. led the Conservative Government, which had been downplaying the threat of climate change, to finally declare climate change a serious threat (Bond 2014). As Weber (2006: 116) notes: "increasing personal evidence of global warming and its potentially devastating consequences can be counted on to be an extremely effective teacher and motivator".

Perhaps it is because modern reality is often mediated through global news

organizations (van Ginneken 1998), which feed on drama and can link hitherto local events, such as a tsunami in Asia, a hurricane in the Gulf of Mexico, and massive forest fires in Australia, into a single global phenomena (Carvalho 2007).

Perhaps it is because increasing public awareness of climate change has coincided with other global crises in food, energy, health, and economics. In early 2008, a systematic breakdown in food systems led to a dramatic rise in the prices of basic staples. Escalating oil prices in mid 2008 created an energy crisis. The U.S. housing and lending crisis sparked a near economic collapse in late 2008. Chemical contamination of Asian food exports led to a global food scare and recall in late 2008. In early 2009, the global swine flu pandemic created worldwide panic and a run on vaccines. These crises collided with a growing scientific understanding of how climate change is physically and politically linked to other environmental and social challenges. Climate change became a *wicked problem* (Rittel & Webber 1973) or *metanarrative*, which could "be considered a symptom of yet other problems" (Hulme 2009: 333).

Anthropogenic Climate Change: A Cultural Phenomena

Yet, despite the unpredictability, complexity, media dramatization, ages–old prophesy of climate catastrophe, and confluence of multiple crises, public interest in climate change may still have waned, as with prior emblems, were it not for the failure of the free market, centralized technology–driven solutions, which had solved prior environmental emblems, to address climate change. As van Ginneken (2003) has shown, rapid shifts in public perception appear to hinge upon a series of critical "arch–events", which demonstrate the "inadequacy of conventional approaches" (p. 111), yet these events only act as critical tipping points in an environment ripe with unease. This unease has been brewing since the beginning of western industrialization (Hajer 1996).

In the late 1990s Greenpeace discoursively linked climate change to a host of other issues (van Ginneken 2003: 129) – using the metaphor of David and Goliath – and activists working on a wide variety of social and environmental issues – such as indigenous rights, poverty and disease alleviation, deforestation, endangered species protection, and the fight against genetically–modified organisms (GMO) – used the opportunity to pin blame for these crises on the free market capitalism and globalization promoted by the western world (Clark 2002, Dewan 2009, Gonzalez 2006–2007, Stiglitz 2002).

The inability of the dominant western institutions to adequately address the wicked problem of climate change emboldened an amorphous global movement for *social and environmental justice* (Hawken 2007), what Klein (2002: 458) calls the *movement of movements*. As Hulme (2009: 353) explains: "climate change is an idea around which…concerns for social and environmental justice can be mobilized,…a new category of justice – climate justice – is demanded, (which) attaches itself easily to other long–standing global justice concerns." Hawken (2007: 23, 2, 12) explains it as such:

> "…it is because of (the) split between people and nature that the social justice and environmental…movement(s) have arisen separately, each with its own history…(yet) the division between ecology and human rights (is) an artificial one.… The movement has three basic roots: environmental activism, social justice initiatives, and indigenous cultures' resistance to globalization, all of which have become intertwined…the environmental and social justice movements address two sides of a larger dilemma. The way we harm the earth affects all people, and how we treat each other is how we treat the earth…."

In contrast to the very centralized, technical and policy–oriented answers to prior emblems, many in this social movement[11] believe that climate change, and its auxiliary challenges, can only be addressed through a dramatic shift in the way society is organized: toward a re–localization of food sources, de–globalization, and a return to sustainable, self–sufficient, community–based living (Berg & Dasman 1977, Berry 1993, 2001, 2005, Kivirist 2009, McKibben 1989, 1995, Pollan 2006, Taylor 2000). Just as the polar bear became the poster child, or metaphor, for anthropogenic climate change (Doyle 2007b, Weiss 2008), so has anthropogenic climate change itself become a cultural metaphor for massive and interlinked social and environmental challenges created under western domination. Unlike prior emblems, anthropogenic climate change actually has the potential to catalyze real societal change (Stern 2009, Ward 2009) and accomplish what prior environmental emblems have not – a deep shift in western society. The success of this social movement is contingent on the perceived opportunities for success of that movement by its players and its continuing momentum (van Ginneken 2003: 13).

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[11] also referred to as the "globalization of resistance" (Notes from Nowhere 2003) or "paradigm wars" (Mander & Tauli–Corpuz 2006).

A. Inquiry

Answering the question: "Why, despite near scientific consensus and sustained public support to address climate change, has so little real progress been made?" requires a much deeper understanding than current research has allowed. Anthropogenic climate change is a scientific, social, and cultural phenomena; yet, it is primarily studied only as a scientific and social phenomena. Natural scientists track the development of the physical changes to climate and try to predict what will happen next, while social scientists track the discourses, frames, media influence, and social movements around climate change. Yet, the cultural aspect of climate change has been largely ignored, and it is this aspect which can illuminate why we have failed, thus far, to successfully address it.

Climate change discourse throughout the public, private, and civil sectors is dominated by the same western nations, which precipitated the global threat of climate change in the first place. It is no coincidence that the western nations historically most responsible for the anthropogenic dimension of climate change share a dominant worldview; a worldview which has allowed us to despoil our very habitat, an idea antithetical to nature. While there are clearly a myriad of cultural differences between and within the western nations of North America, Western Europe, and Australasia, they share a common dominant worldview. Devall and Sessions (1985: 69, *reordered*) call this the *Dominant Worldview*, which sees:

I. "Dominance over Nature
II. Natural environment as resource for humans
III. Belief in ample resource reserves
IV. High technological progress and solutions
V. Material/Economic growth for growing human population
VI. Consumerism
VII. National/centralized community"

This worldview was shaped over time by the underlying assumptions of Protestant Christianity and the western science of northwestern Europe, driving colonialism around the globe and ultimately shaping the founding principles of the United States. This worldview fueled the industrial revolution and subsequent rise and re–exportation (or globalization) of free market capitalism around the globe. Furthermore, the discursive affinity, or "similar way of conceptualizing the world" within this "discourse–coalition" (Hajer 2006: 70) has come to dominate because, so "many people use

(them) to conceptualize the world (discourse structuration) and it (has) solidifie(d) into institutions and organizational practices (discourse institutionalization)". In essence, even those who do not subscribe to the dominant worldview still live by its tenets (Uhlmann et al. 2011), as this western worldview has been *institutionalized* within western legal and social systems (Godden 2000, Kluckhohn 1950). As Parsons and Smelser (1956: 16, 51, my emphasis) have shown: "a social system is always characterized by an *institutionalized* value system…(and prestige) is accorded as a reward for conformity with a set of values." Furthermore, through cultural (Rothkopf 1997, Tomlinson 1991), economic (Korton 1995), and ideological imperialism (Soros 1998), the West has appropriated the discourse of universalism to normalize western assumptions within the global – but largely undemocratic (Brecher & Costello 1994) – institutions[12], which are dominated by and dependent upon western nations. Alternative worldviews are marginalized. This was not some massive western conspiracy. The collective beliefs, which underlie worldviews, are simply unquestioningly ingrained within western thought and institutions.

Furthermore, solutions for climate change – whether they be technology, policy, or programs for behavioral change – are constricted by the same western assumptions that created climate change in the first place. In essence, we are trying to solve climate change through the same cultural lens that created it. This dissertation will argue that successfully addressing climate change requires us to examine these deeper cultural beliefs that shape the discourses and frames of this institutionalized western worldview, particularly in the United States. I identify three key, largely unquestioned *deep frames*, those deepest moral convictions and political principles which structure a worldview (Lakoff 2006a, 2006b: 12) – Humankind as Steward, Nature as Controllable, and One World Market – and how they define environmental problems, such as climate change, and limit the range of solutions we are willing to consider to solve them.

Through the institutionalized western cultural lens, addressing climate change is often portrayed as a sacrifice in which westerners must give up the things they love and the progress they have made to return to a more

[12] such as the World Bank, International Monetary Fund (IMF), World Trade Organization (WTO), Organization for Economic Cooperation and Development (OECD), and sections of the United Nations (Korton 1995).

primitive life in order to "save the Earth"[13]. Yet, over the past decade, psychologists, anthropologists, and comparative religion scholars studying human nature and well being (Campbell 1949, Csíkszentmihályi 1990, Haidt 2006, Maiteny 2000, Næss 1973, Seligman et al. 2005, Tilly 2006, Weinstein et al. 2009, Wilson 1984) have found that humankind derives happiness – not from the consumption, individualism, and artificial habitats that characterize western lifestyles – but from meaning found through a combination of real purpose, community, and contact with nature. Psychologists have found that individuals who pursue more extrinsic, western-style goals of attainment are less happy than individuals who pursue more intrinsic goals that lead to relatedness, competence, and autonomy (Kasser & Ryan 1993, 1996; Niemiec et al. 2009, Sheldon et al. 2004). From this perspective, the chasm between our current system and these universal sources of happiness may be the source of many of our current environmental and social ills (Clark 2002, Haidt 2006).

If we argue that the dominant worldview is both unable to effectively address climate change and incapable of providing the meaning all humankind seek through purpose, community, and contact with nature, then what might we learn from non-dominant – or insurgent – discourses about climate change and human nature? To what extent is the apparent climate change impasse a result of unaddressed tensions between the dominant worldview and human nature? The dominant worldview naysayers argue that the key to addressing climate change – and as its auxiliary ills – lies not in eco–consumerism – 'keeping shopping, but be green about it'[14] (Seyfang 2005) is simply an extension of materialism – nor in shaming and scaring the western public into caring through drowning polar bear campaigns and doomsday scenarios (World Wildlife Fund 2008: 15). They argue that it is about returning to "the very things that…make people happy…(the same things that have always helped groups, going back to) …the (time of) hunter–gatherer (societies): relatedness, autonomy, curiosity, and competence" (Velasquez –Manoff 2008: 2). The keys to addressing climate change (and its auxiliary problems), restoring community, and finding happiness are all the same (Seligman et al. 2005).

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[13] As one blogger says, "(there is) just no way we can stop our carbon emissions with out a return to stone age lifestyle. Not something I want for myself or my children". http://latimesblogs.latimes.com/greenspace/2010/10/prop–23–obama–global–warming–climate–change.html, Posted by: John T | October 27, 2010 at 11:10 AM.

[14] For example, see http://www.marieclaire.co.uk/lifestyle/ethical/199107/marie–claire–goes–eco–chic.html

These ideas draw from the worldview of hunter–gatherer societies, which are arguably as old as humankind and most commonly associated with indigenous tribes around the world who continue to herd, fish, and harvest like their ancestors, not as if they own the land and waters, but because the people themselves belong to the land (Smith 1995, Taylor 2001a). This relationship to nature is reinforced by shamanistic, natural world–bound paganism. While indigenous societies are more often associated with an *exotic other* (Ashcroft et al. 1998: 85), key tenets of this worldview have always existed as *a minority tradition* (Devall & Sessions 1985: 18-19) or *insurgent discourse* (Cox 2010: 64) in the West[15]. Næss (1973) termed the western expression *deep ecology*. While deep ecology as an academic branch of ecological philosophy only originated a few decades ago, the traditional biocentric view (McKibben 1989) of its core philosophy reflects the very ancient Gaia worldview of indigenous people (Taylor 2001a).

In sharp contrast to the dominant worldview, Devall and Sessions (1985: 69, *reordered*) articulated the key tenets of *deep ecology* as:

I. "Harmony with Nature
II. All nature has intrinsic worth/bio–species equality
III. Earth 'supplies' are limited
IV. Doing with just enough/recycling
V. Elegantly simple material needs…serving the larger goal of self–realization
VI. Appropriate technology; non-dominating science
VII. Minority tradition/bio-region"

Their definition, as well as Cramer's (1998), contrast between the dominant and deep ecology worldviews are strikingly similar to the contrast made by anthropologists, Ember and Ember (1992), between the polytheistic, matriarchal, and relatively peaceful *forest* groups and the monotheistic, patriarchal warriors of *desert* civilizations, which culminated in current western civilization. This same contrast has been made in turn by eco–feminists "paternalistic versus maternalistic" (Shiva 1992), theologians "Apollonian versus Dionysian" (McFague 1991), primatologists "chimpanzee versus bonobo" (De Waal 2005), and biologists "Billiard Ball versus Indra's Net Gestalt" (Clark 2002). In deference to Lovelock's (1979) identification of the

[15] See Taylor (2001a, b) for an overview of the diversity of spiritual movements captured within deep ecology.

classic mythological view of Earth as a living, interrelated system, we will refer to these alternative worldviews collectively as Gaian.

The last tenet of deep ecology, "bio-region" (Berg & Dasman 1977, McKibben 1989, 1995, Taylor 2000) lies at the heart of a growing "local" movement in the United States, which has brought together thousands of smaller movements under the global movement for social and environmental justice (Hawken 2007). This movement intersects with many organizations working in various aspects of social and environmental justice, which see it as a move towards greater community building, empowerment, sustainability, resilience, local (consensus, collective) decision making, and greater economic, food and energy security; in short, a return to a local scale of economy (Taylor 2000). It has grown amorphously out of many different actors, motivations, and localities and crosses multiple environmental and social policy areas. Yet, the idea of resituating our society to a local level runs fairly consistently throughout. Perhaps, not surprisingly, some of the key players in this movement, including Hawken, grew out of the anti–globalization movement. While this movement itself includes many disparate elements, it launched the backlash against a drive to globalization at a time when Friedman's (2006) Flat World seemed like an inevitable (and desirable) destiny.

B. Social Change

In his analysis of social changes in the 20th century, e.g., the rise of McCarthyism, civil rights, and various religious sects, Wilson (1973: 8) defined a social movement as the "conscious, collective, organized attempt to bring about or resist large–scale change in the social order by non–institutional means". When Pollitt (2008) studied the relationship between time and public policy problems, he found that "when precipitating events come together,…old trajectories are broken and a new path is begun;…sudden, radical change…(is possible, predicated on)… actors (who) have failed to learn and are finally presented with environmental pressures so strong as to exclude choice (p. 45–6)." In doing this, "new values may have to be planted and nurtured, old meanings or understandings jettisoned, and erroneous beliefs reframed in order to garner support and secure participants (Snow et al. 1986: 463).

In his work on modern day identity-seeking, Klapp (1969: 14) identified social movements as a direct result for humankind's search for meaning, when existing social systems lack adequate *feedback and symbolization*. New

social movements provide more meaningful forms of identity and engagement. Snow et al. (1986) showed how savvy social movements, such as Common Cause, the National Rifle Association, the pro-life and pro-choice movements, and the Christian Right have grown by reaching out to "*public opinion preference clusters:*…aggregates of individuals who share common grievances and attributional orientations, but who lack the organizational base for expressing their discontents and for acting in pursuit of their interests" (p. 467). To attract these individuals, they have "extend(ed) the boundaries of its primary framework so as to encompass interests or points of view that are incidental to its primary objectives, but of considerable salience to potential adherents. In effect, the movement is attempting to enlarge its adherent pool by portraying its objectives or activities as attending to or being congruent with the values or interests of potential adherents" (p. 472).

The kind of social change needed to shift some of the key tenets of the dominant worldview towards more deep ecology way of thinking requires the kind of *global interpretive frame transformation*, which has marked successful social movements in the past (Snow et al. 1986). Snow and Benford (1988, *reordered*) identify three core framing–tasks, and state that the degree to which framers attend to these tasks will determine participant mobilization.

I. Diagnostic framing – Define the problem and causes
II. Motivational framing – Understand why individuals would change
III. Prognostic framing – Articulate a solution and strategy

While a social movement around climate change has emerged over the last ten years, *deep ecologist* and *bio-regionalists* have been offering a substantially different lens on environmental and social issues for decades. Yet, it is only now gaining some mainstream attention in the climate change debate and still faces an uphill battle to significantly shift the system institutionalized in the dominant worldview. Part of this is because *deep ecology* and *bio-regionalism* are inherently decentralized, and many within the movement are struggling to harness all of its parts into a coordinated movement. Many question whether central coordination is even consistent with their mission.

C. Research Background

Following undergraduate and graduate work in psychology and intercultural communication, economics and affairs, I spent sixteen years working throughout Asia, Europe, Australasia, and North America in various com-

munication capacities for U.S. organizations. In each function, I was a cultural bridge between my primarily American colleagues and stakeholders in other countries. Despite my best efforts, however, it seemed at times that the harder I tried to accommodate, educate, and coordinate between all of the various cultures with which we were trying to collaborate, the more often I met resistance in the name of cultural difference. About six years into my career, I noticed that my sensitivity to cultural difference was often misused. Cultural difference was often blamed for problems between colleagues of different nationalities, when the problem was often simply one of distance, language, or personal interest. I began to wonder whether the intense study and focus of 'intercultural communication' and 'cultural difference' in academic, private, and political spheres provoked more misconstruction and misuse of cultural difference than it actually prevented.

Throughout this time, I also noticed how effectively the western lifestyle was marketed across the world as a universal ideal and free market solutions were often deemed appropriate to address public issues. The quintessential example of the former is Coca-Cola's key decades-old message, "One World, One Coke", embodied in an advertisement, titled Four Corners (Selmore 2007).

Three years later, my organization wrote and produced a film for the Sámi cultural center based in Karasjok, Norway. Like many indigenous tribes, which originated on western–claimed lands, the Sámi had been rounded up, Christianized, indoctrinated, and discriminated against for nearly two centuries. While official discrimination ended in the second half of the twentieth century, widespread hostility and mistrust still existed between the Sámi and their national counterparts. Before the theater was built, the existing Sápmi Park was exactly what one would expect of an indigenous cultural center – crafts, food, and tepees. Yet, the theater was to be different. Instead of teaching visitors what made the Sámi so anthropologically–unique, the film focused on what universally relevant ideas the Sámi had to teach the modern world about sustainable living, consensus, and community building. The result was thought–provoking and widely–acclaimed by both the Sámi and foreign visitors alike.

Five years later a colleague of mine and I developed a foundation of ecological design principles for the experiential design community. Our industry had always relied on the universal ideas of storytelling, meaning, and place making, but we incorporated them into larger ecological ideas of biophilia

(connection with nature Wilson (1984)), biomimicry (design inspiration from nature Benyus (2002)), and sustainability (driven by the cradle to cradle and zero footprint notions of McDonough and Braungart (2002)). While this program originated out of a joint experiential design project which we had completed with McDonough, both my colleague and I had been long time environmental activists. As the primary researcher and writer of the program, I came to understand these universal ideas and wondered how they related to both my earlier experiences with cultural difference and universalism. This interplay between cultural difference and universalism, and the ways in which they were used and abused, formed the basis of my initial research inquiry.

In the spring of 2006, I attended a seminar series at the University of Amsterdam on Culture, Identity and Conflict and became familiar with Amarta Sen's (2006) work on cultural identity, Gregory Stanton's (1998) work on the steps to genocide, and Michele LeBaron's (2002, 2003 a, b) work on conflict transformation, amongst others. It was clear that not only was there a plethora of evidence that cultural difference and universalism were abused as concepts, the study of common ground found throughout conflict transformation studies was widely understood, yet rarely discussed in intercultural communication studies. With all of this background, I began my doctoral research with the tentative title, "Universal Crises Demand Universal Policies: Refuting Cultural Difference as a Real Barrier to Developing Effective Universal Policy", in January 2007 with the research questions:

> Which universal notions underlie the cultural myths of a society? How can these notions be methodologically harnessed to build empathy and cooperation between cultures in conflict over environmental issues? Will this process eventually create the "Future Myth" foretold by Joseph Campbell?

Within weeks of starting my research, the Intergovernmental Panel on Climate Change published its Summary for Policymakers, stating unequivocally that global warming was real and its acceleration was driven by humankind. What was striking was not so much the announcement as the dramatic increase in public awareness of climate change in a relatively short period of time throughout public, private, and civil society across the globe. Climate change seemed to have captured some element of western imagination, and I began to see it being used as a metaphorical umbrella to discuss many other social and environmental issues, such as loss of biodiversity,

poverty, overconsumption, and energy security. I wondered why climate change seemed so much more powerful of a concept than prior environmental problems, such as the hole in the ozone and acid, and chose to use it as a case study for my inquiry.

D. Hypothesis

While some of these observations related above seemed somewhat unrelated at the time, I saw the beginnings of red threads which connected the ideas together. I suspected that the misuse of cultural difference – and its counterpart, universalism – had allowed the western world, in particular the United States, which embodied the extreme expression of this worldview, to marginalize alternative worldviews and "universalize" its own. Furthermore, it seemed that the U.S. had institutionalized this worldview within the international bodies, which it helped create in the mid–20th century, e.g., the Bretton Woods institutions (International Monetary Fund and World Bank) and the precursor to the World Trade Organization (General Agreement on Tariffs and Trade), and still controls. The dramatic rise in global crises in the early 21st century – in health, the environment, economy, security, energy – could often be traced back to policies, which originated out of these organizations.

Furthermore, I suspected that climate change had become so salient within the western world because it was an ancient metaphor, in which humankind is punished by the natural world for its greed. It struck some deep chord or realization within the West that something was not quite right. Our way of life wasn't working, and climate change facilitated that discussion – it was a cultural metaphor. Yet, this deeper discussion of what climate change meant seemed to be missing. Anthropogenic climate change had been extensively studied both as a scientific and social phenomena. However, I came to believe that no amount of scientific proof or global policy instruments would successfully address climatic change because we were not addressing the deeper frames – and their origins – within which the problem was first created. Only by identifying those deep frames, could we recognize the way they limited our ability to address climate change and allow ourselves to consider alternative solutions outside their realm. Perhaps, along the road, the west could breach the chasm which had made many so unhappy and unhealthy over the past decades. A few months into my research, my research question evolved into two parts:

I. How could the most intelligent and socially developed species in the history of the earth have allowed anthropogenic climate change – a threat to the very habitat of humankind – to happen?

II. Why has anthropogenic climate change sustained such public interest and could it catalyze substantive change in western society?

Ultimately, however, I realized that my research was not really about climate change. The pattern of western discourses, science, and policy surrounding it simply served as an excellent case study – or cultural metaphor – to illustrate the *deep frames* that underlie the social, cultural, and religious influences, assumptions, and limitations of the dominant western worldview. Illuminating these deep frames would allow us to challenge them in the face of what we know about how humankind derives happiness and how this research may be used to facilitate the shift towards a healthier society.

In the end, my research questions became two–fold:

I. What does the development of and intense public interest around anthropogenic climate change say about the United States? (Climate Change as Metaphor)

II. How might this interest catalyze substantive change in the United States? (Climate Change as Catalyst)

E. Methodology

According to Hegelian thought, nature is a wholly separate entity not subject to the constructionist influence of human entities, such as culture and society (Houlgate 1998); the natural world is simply indifferent to human emotion, need, or ambition (Csíkszentmihályi 1990). Humans project their own meaning on to nature, which reflects the worldview they have constructed (Kelly 1955, 1970), while dramatic changes, such as the severe weather experienced now in nearly every corner of the world, force people of diverse backgrounds to find reasons — or what Tilly (2006) called "organized answers to the question of 'why?'" — for climate change, e.g., Barringer (2008). "The giving of reasons… connects people with each other… (and)… provides… shared accounts of what is happening" (Tilly 2006: 10), which can begin to constitute a common explanation about the world. These shared accounts, or storytelling, play a large role in *inter–subjective* (Abdelal

et al. 2010) or collective sense making of exceptional events and unfamiliar phenomena. The collective storytelling in this massive search for meaning has created one of the "great narratives in global society" (Neverla 2007a, b), mirroring a decades–old forecast by comparative mythologist, Joseph Campbell (1988), that future myths would revolve around a common concern for the planet upon which all humanity depends.

These shared accounts are constructed through discourse, those "shared ways of appreciating the world, embedded in language…to interpret little pieces of information and ensemble them together in an understandable story or account of reality" (Dryzek 1997: 8). Cox (2010) calls this the *constitutive power of rhetoric*, and defines the growing field of environmental communication (p. 59) as the "pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world". He argues that discourse is a "recurring pattern of speaking or writing that has developed socially…from multiple sources,…(which) influence our understanding of how the world works or should work" (p. 63). Hajer and Versteeg (2005: 175) explained discourse as "an ensemble of ideas, concepts and categories through which meaning is given to social and physical phenomena." Any given phenomena will be explained through a variety of discourses. For instance, the Institute for Public Policy Research (Ereaut & Segnit 2006: 12) identified three groups of linguistic repertoires[16] for talking about climate change — alarmist (the world is ending), optimistic (let's just stay calm), and pragmatic (20 things you can do to save the planet). Cox (2010: 60-61) outlines the various metaphors and rhetorical genres, which run through environmental discourses.

Yet, in trying to create a favored meaning and course of action, stakeholders in any given issue invoke favored discourses or metaphors. As Edelman (1985: 10) explained: "it is language about political events…that people experience, (not the events themselves, and)…the critical element in political maneuver for advantage is the creation of meaning…that legitimize(s) favored courses of action." The dominant "discourses shape what can and cannot be thought, delimit the range of policy options and thereby serve as precursors to policy outcomes" (Hajer & Versteeg 2005: 178). While not of-

[16] Ereaut and Segnit (2006: 12) speak of linguistic repertoires, "systems of language that are routinely used for describing and evaluating actions, events and people, (which) might include a distinctive lexicon, a set of grammatical or stylistic features, or particular images, metaphors, idioms, stories and categories."

ten intended to be deliberately manipulative, discourses, metaphors, and frames are rhetorical and biased. As Hajer (1996: 258, 259, 256, 257) points out:

> "the ecological crisis is first and foremost a discursive reality, which is the outcome of intricate social processes… (that may be a)… debate… no longer… on the protection of nature but… on the choice of what sort of nature and society we want… (However, from a)… "cultural politics perspective,… why (are) certain aspects of reality… now singled out as 'our common problems?'… (when there are)… various alternative scenarios for development that could be constructed."

Deconstructing the dominant discourses of any discussion can illuminate the underlying motivations and assumptions of those who invoke them. To better understand how climate change came to be and what will determine its ultimate effect on western society, this dissertation looks at how it has been socially and rhetorically constructed (Berger & Luckmann 1966, Bird 1987, Cox 2010, Dryzek 1997, Gergen 1996, Sarbin & Kitsuse 1994) and how the dominant social constructions affect the solutions which can be envisioned. I am, in essence, trying to answer Hajer's final question of "why certain aspects of reality…(are) singled out as 'our common problems'" (1996: 256). According to Cox (2010), *dominant discourses* "express…taken–for–granted assumptions and values about how the world is or should be organized" (p. 58), while *insurgent discourses*, "question society's dominant discourses…and offer alternatives" (p. 64). Cox refers to these insurgent discourses as *critical rhetorics* (p. 228–9, *paraphrased*), which question the dominant ideology and articulate an alternative vision. Opposing discourses often make use of metaphors to lay claim to symbolic legitimacy through a public, "rhetorical struggle" (p. 66). Whichever side is granted legitimacy by its constituencies can marginalize dissenting views as unreasonable, i.e., outside the legitimate boundaries of what is deemed acceptable.

In looking for the right methodology to conduct this research, I considered discourse analysis, which Hajer (2010) defines as "a method to analyse what language does, the politics of meaning that takes place, the way in which it affects perceptions and cognitions, the way in which it distributes power to some and less to others" and argumentative discourse analysis (ADA), which he claims "trace(s) a particular linguistic regularity that can be found in discussions or debates", but rejected them both. For although discourses,

frames, and linguistic repertoires are socially, culturally, and religiously grounded, traditional discourse analysis often stops at simply identifying patterns. It typically dissects a set number of sources during a set period of time with the intent of quantitatively identifying the frequency of specific word usage, which signifies a specific discourse. Results are quoted in percentages with little further inquiry into the meanings or causes behind these percentages. While this may be statistically interesting – answering the who, what, where, when, and (sometimes) how – this kind of analysis fails to answer 'why?'. Why is a particular discourse – or rhetoric – used? What does it tell us about those who use it? What are the implicit and explicit motivations to use a particular discourse? What is the relationship between a particular discourse and power? Answering these questions require a deeper contextual and cultural inquiry – vis–à–vis the discourses – than a LexisNexis search and quantitative coding would allow. Only by diving deeper than discourse analysis, into the historical influences and subconscious assumptions of the worldview shaping those discourses, can we hope to truly identify the root causes of the environmental and social ills with which climate change has become intertwined.

As Cantril (2010: 6) noted: "relatively little intercultural research on the relationship between individual identities and environmental conditions has been conducted". It is this gap – between relative cultural identity and the constitutive force of rhetoric, particularly related to the environment – which I hope to bridge in this dissertation. My methodological contribution is to go beyond the current discourse analysis of climate change as a scientific or social phenomena and move it into a deeper *cultural metaphorical analysis* to help answer the missing question of 'why?'. For this, I relied on Schmitt's (2005: 358) Systematic Metaphor Analysis, which created a "procedure for the reconstruction of metaphorical concepts" based on Lakoff and Johnson's *theory of metaphor* (1980), to uncover the deep frames that connect multiple discourses and the dominant worldviews that inform these frames. This approach reflects the distinction between "micro–level dissection and macro–scale cultural or historical analyses" defined in communications consultancy practice (Ereaut & Segnit 2006: 5), which is:

> "essentially qualitative, and so do not involve numerical analysis…(but also)…a combination of art and science: interpretative, while also evidence–based and systematic. Like all qualitative research, this interpretation engages not only the specific material being analyzed, but the cumulative experience in cultural analysis

> of the researchers themselves…to understand cultural meanings and cultural change, and the ways these are encoded and decoded through communications of all kinds."

My research turned to Abbott's (2004) heuristic view that "social reality is still understood largely as a woven web of stories". The deep frames, which have woven the social phenomena and societal enablement of anthropogenic climate change, together within the western nations most historically responsible (Baumert et al. 2005), emerge in the dominant frames and linguistic repertoires of the discourse–coalition or, "ensemble of a set of story lines, the actors that utter these story lines, and the practices through which these story lines get expressed" (Hajer 2006: 71) within the public, private, and civil sectors. By examining the dominant discourses (stories) around climate change through time, agency, and place, the "red threads" that hold the web together emerge. These storylines are not necessarily recognizable by those who use them, but can be "traced by the analyst" (p. 68). As Motterlini (2002: 34) explains:

> "the heuristic–methodology looks backward to identify the rules that made (the past) possible and, at the same time, it looks forward to advise on how to obtain progress in the future. Heuristic–methodology, although fallible, is both evaluative and normative…(It) is not a contemplation of eternal truths, but rather an effort to interpret the present in the light of the past with a view to shaping the present for a better (utopian) future."

This heuristic approach is appropriate for two primary reasons. First, it "seeks to reveal more fully the essence or meaning of a phenomenon of human experience (and)…discover the qualitative aspects, rather than quantitative dimensions, of the phenomenon,…(which can be) illuminated through careful descriptions, illustrations, (and) metaphors…rather than by measurements, ratings or scores" (Moustakas 1990: 14). It is by its nature an academic inquiry, not a scientific experiment. Secondly, heuristic research can only be undertaken by a scholar, who is intimately and autobiographically related to the question. Unlike phenomenological studies…heuristic researchers "must have had a direct, personal encounter with the phenomenon being investigated,…(which) demands the total presence, honesty, maturity, and integrity of a researcher who not only strongly desires to know and understand but is willing to commit endless hours of sustained immersion and focused concentration on one central question, to risk open-

ing of wounds and passionate concerns, and to undergo the personal transformation that exists as a possibility in every heuristic journey...(with an) emphasis on the investigator's internal frame of reference, self searching, intuition, and indwelling (p. 12)." It is a personal journey, which "engages one's total self and evokes a personal and passionate involvement and active participation in the process" (p. 14). For throughout this journey, I have come to realize that I have personally made the *global interpretive frame transformation* from the dominant western worldview, which has propagated climate change and its auxiliary issues, to a worldview closer to that held by deep ecologists and bio-regionalists, which climate change may invoke on a global interpretive scale. Some may argue that this personal involvement might make me too subjective. Yet, for as much as academia prides itself on complete objectivity – the very notion of which will be discussed herein – it is impossible to wholly remove our own subjective worldview lens when studying our subjects. This lens shapes the starting points of our research, the questions we ask, the sources we use, the ways in which we proceed to study our subjects, and the rhetoric we chose in order to report our findings. It is this lack of distance between researcher and subject, which is often the chief criticism of heuristic research. Yet, Moustakas (1990) sees this personal involvement in the subject matter as the very strength of heuristic research.

Ultimately, though, it is the responsibility of any researcher to create academic distance in order to be considered valid. I created this distance in two ways. First, although I was raised in the United States within the dominant western worldview, which I attempt to study, I deliberately chose this methodology both for the insight I have gained from having once lived inside it and for the relevant personal and professional experiences I have had in the past, which led me to this research in the first place. Furthermore, I spent more than a decade living outside the United States and have come to challenge much of what I had believed. Most importantly, however, because I once held this worldview, I recognized the assumptions of it within the discourses I was studying. While not personally agreeing with the opinions, I can follow the logic and identify the basis for the underlying assumptions. This is far richer than a researcher who is studying these discourses as a total stranger. In addition, I returned to the U.S. prior to my final writing and was able to test the conclusions I had drawn. I was the proverbial fish who could finally see the water, and I would argue that those who emerge from inside a worldview can best understand its most dearly held beliefs.

Secondly, I meticulously followed Moustakas' steps: initial engagement,

immersion, incubation, illumination, explication, creative synthesis, and validation (to this list, I would add "repeat", as heuristic research is an iterative process). The key to validation is the "sharing with others". As I outline in my specific process below, I tested my findings consistently throughout my process against a wide range of audiences – both academic and professional, both in presentation and in writing across the many disciplines my research crossed. The reams of feedback I received were considered and addressed. Those who have followed my work from the beginning can attest to my quest for feedback and ability to respond and incorporate it into future iterations.

For the systemic metaphor analysis, I used the starting point of Schmitt's (2005: 374) *Subjectivity and Method II: Interpretations* for researchers who:

I. "have a corresponding knowledge of the world,
II. studied the linguistic materials intensively,
III. experience(d)…the corresponding (sub)cultural or specialist contexts will be in a position to draw conclusions more easily".

As Schmitt argues (p. 376–7), "A particular use of metaphor as a resource can be recognized with the benefit of extensive field experience…(and) the process of assessment, in being able to see one aspect of a metaphor as 'highlighting' and another as 'hiding,' requires a subjectivity that is able to draw on a culture that has been lived in and is understood". This type of analysis is clearly targeted at culturally–constructed metaphors around recognized phenomena, which can be found in a wide variety of texts: written, oral, and mediated. One of its limitations, therefore, is that it does not provide complete demographic–type answers, which are popular within social science research, nor is it reaching for the type of graph–able content analysis found in discourse studies. Yet, this type of analysis – based on firsthand knowledge and experience – offers a rich "insider" view of phenomena, which cannot be achieved by researchers who have never lived the experience.

As with heuristic research, metaphor analysis requires a certain academic distance and a deliberately slow pace to ensure that hasty conclusions are not being drawn. Creating this distance and deliberation have been discussed earlier, yet I will provide one specific example here. In early stages of my research, I was a committed climate change "believer" with unerring faith in the scientific process and reported results. Both a colleague and my

advisor encouraged me to address the social construction of science itself, as well as the very frames of crisis and consensus. This forced me to reconsider strongly held beliefs and consider how the frames used by academia contributed to the social construction of climate change itself. My observations from this standpoint greatly influenced my dissertation herein.

F. The Lived Experience

This section describes how I came to gain the firsthand knowledge and "lived experience", which qualify me for the type of heuristic, interpretative research described above. The subsequent section looks at how my research questions developed out of this experience.

In short, for the first twenty–four years of my life, I was wholly a product of – and unconscious holder of – the western dominant worldview described by Devall and Sessions (1985) and Cramer (1998). My white, Anglo–Saxon, Protestant (WASP) paternalistic family was staunchly socially and fiscally conservative, free market believers, who alternatively loved technology and struggled to understand science within religious limitations. My ancestors immigrated out of Northern Europe in the early twentieth century in search of abundant farmland and greater opportunity, the key ingredients in the *American Dream*[17]. These immigrants identified education as the key to upward mobility in the less-rigid class system of the United States, and my parents were part of the first generation to graduate university and move into professional careers. Because my grandparents had labored so hard to achieve this dream, they believed the same was possible for anyone. This way of thinking is strongly tied to Americans' favorite type of hero, the *self–made man*[18], the idea that through hard work and moral virtue, any individual can rise from humble beginnings and achieve great success. If someone does not achieve the same opportunities, they are simply are not working hard enough. My family sees no systemic advantages for (white) immigrants of European origin, but simply believes that they work harder. Furthermore, because this success is seen to have been individually earned, without any societal assistance, the fruits of their labors are seen to be theirs alone. Therefore, the reasoning goes, they have the right to keep their money. Taxes are considered almost a theft of a bloated system, which seeks to "reward" those too lazy to work hard for their own success. Instead of pub-

[17] Associated with land-ownership and upward mobility

[18] Typified by the rags-to-riches stories of Horatio Alger, Jr.'s 19th century dime novels and the current movie, *The Pursuit of Happyness*.

lic programs for disadvantaged groups, voluntary charity is preferred to assisting those in need because the individual donor can more tightly control who receives help and under what conditions. This reflects the dominant Christian view of benevolent tithing: "Each of you should give what you have decided in your heart to give, not...under compulsion" (Bible, 2 Corinthians 9:7, NIW 2010). Understanding this thinking makes it easier to understand why American tax rates for the wealthiest 1% have remained the lowest in the western world for the last forty years.

Like thousands of our neighbors, my father worked for one of the massive U.S. defense contractors, whose main customer was the Department of Defense. Despite this virtual financial dependency on government funding, the view of government in my community was very negative. The mantra was "keep the government out of my face, my home, and my marketplace". Private business was seen as the best source of jobs, efficiency, and progress; government was inefficient, and politicians were corrupt by their very nature. America was seen as a Christian nation, which had been bequeathed by God to be conquered and settled by the brave descendants of the English pilgrims (Greenberg 2005, Stephanson 1995). These views still largely mirror the dominant worldview held in America today. Of course, there are some contradictions within these views as many of these view holders relied upon massive government defense contracts for lifetime employment and have always enjoyed the results of government programs for health care (Medicare), transportation (roads and railways), and education (free K–12 education and, until the last decade, inexpensive, world–class public universities). Yet, these contradictions were never noted, nor discussed. Moreover, these views were not exchanged as opinions, which would imply that other opinions may exist and have validity; they were presented as fact. I was told what to think, not taught how to think. There were moments of *cognitive dissonance* (Festinger 1957), when I witnessed events, which seemed to contradict my belief system. However, the *tipping point* (Gladwell 2000), wherein my worldview changed, occurred several years later.

G. Method

My specific methods combined the direct interpretation of a massive literature review (fulfilling Schmitt's second requirement), my own deep knowledge and experiences in the *dominant worldview* in which I was raised but later questioned, as well as the alternative worldview to which I was exposed throughout my life outside the U.S. (first and third requirements described earlier), and Moustakas' seven steps: initial engagement, immer-

sion, incubation, illumination, explication, creative synthesis, and validation. The following paragraphs describe how I did this in more detail.

In late February 2007, I commenced an eight month review of literature from academic, public, political, commercial, and mass media sources related to one or more of my observations and my research questions, carefully noting concepts, findings, and further literature suggestions for each. This combined an academic literature search and *grey literature capture* to broaden my reference base. Employing the *backward snowball* method, through several iterations, I accumulated a broad set of notes. During this time, I also documented many of my own experiences, which had led me to my initial research questions and reflected upon them in light of the literature, again making careful notes. At the end of this review period, I categorized my notes and began to build a rough outline around them. The result of this exercise was presented in November 2007 and later published (Ford 2010) at a special conference on Communicating Climate Change held in Braga, Portugal under the title The Role of Culture in Climate Change Discourse: Appealing to Universal Motivators to Restore the Natural World.

Following this presentation, I received excellent feedback and a very long list of further research suggestions from the attendees. After incorporating this feedback and notes from the literature suggestions, as well as further research which each of these inspired, I presented the next iteration to my PhD Club in February 2008. Again, I received excellent feedback and further literature suggestions. For the following thirteen months, I alternated between further reading, reflecting, and writing; having this writing reviewed by my advisor and an informal, diverse reading committee; and presenting my evolving findings to a diverse set of audiences. These audiences included panel presentations at the International Communication Association Conference in May 2008 in Montreal and the Centre for Research on Socio–Cultural Change Conference in September 2008 in Oxford, as well as to environmental activist groups, such as Greenpeace International, and staff members of the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat in Bonn, Germany. Each provided rich feedback and further literature suggestions. Finally, in early 2009, an informal mentor of mine in the political science department of the University of Amsterdam gave me a lot of specific feedback on my organization, methodology, and communication style, which vastly improved what I had been working on. This presentation, writing, and feedback loop helped to test the conclusions I was beginning to draw from my research.

In March 2009, I was invited to present at the prestigious Climate Change Global Risks, Challenges & Decisions (IARU) Conference in Copenhagen as part of a session on 'Cultures, Values & World Perspectives as Factors in Responding to Climate Change'. Although this session was part of the larger theme 'Mobilising the Populace: Human Dimensions of Climate Change', it was actually the only session which looked at the humanist's side of climate change. Although the conference was overwhelmingly natural science and economic based, this session was extremely popular, and my paper 'Re–Engaging Planet Earth: Shifting the Western Worldview to Enable a More Effective Climate Change Response' was very well received. Out of the six presenters, nearly all of the questions were addressed to me, and I spent the rest of the conference in conversations with many other members of the audience. Following my presentation at this conference, and his subsequent reading of my paper, Mike Hulme, founding Director (2000–2007) of the Tyndall Centre for Climate Change Research at East Anglia told me, "I have started to read (your) papers with great excitement. It is this type of analysis of climate change that I believe is necessary: both intellectually necessary and spiritually essential". Unbeknownst to me, Dr. Hulme was about to launch a book, "Why We Disagree on Climate Change", which echoed many of my own findings. With the encouragement I received from this conference, my conference paper and some further literature suggestions, I began to develop my final draft. A shortened version of the first draft of my final paper was sent to the online Klima Conference in November 2009 in Berlin. In preparation for the publication of my paper (Ford 2011), one reviewer gave me both very positive encouragement, as well as many helpful suggestions.

Just as I thought I was done, the worldwide economy collapsed in September 2009. This collapse did not necessarily challenge what I had written, but I realized that I could further develop my research by testing my findings against it. In early 2010, I repatriated to the United States, and, in June, I presented some of this new research to the annual conference of the Association for Environmental Studies and Sciences in Portland, Oregon. At this interdisciplinary conference, I was the sole representative from communication and rhetorical studies, and my contribution was very well received. The final writing of this manuscript took place from 2011- 2014 as the economy began to rebound, albeit disproportionately in certain economic and geographic areas. This allowed me to track the rhetoric and developments of climate change public opinion and policy against my findings.

Invited Presentations	Chapters
'Climate Change as Metaphor: Contributions from Cultural and Rhetorical Studies in Understanding an Environmental Crisis' on Panel: "Many Shades of Climate Change" Association for Environmental Studies and Sciences Conference 17-20 June 2010, Portland	1 – 5
'Climate Change as Metaphor and Catalyst: The Deeper Meaning and Potential of an Environmental Crisis' Klima 2009 – Climate 2009 Conference 2-6 November 2009, Berlin	1 – 5
'Harnessing Universal Motivators to Enable a Humanitarian Response to Climate Change' on Panel: "Culture, Values and World Perspectives as Factors in Responding to Climate Change" Climate Change Global Risks, Challenges & Decisions Conference 10-12 March 2009, Copenhagen	1 – 5
The Role of Culture in Climate Change Policy Making: Appealing to Universal Motivators to Address Global Challenges' on Panel: "Politics and Citizenship" Centre for Research on Socio-Cultural Change (CRESC) Conference 3-5 September 2008, Oxford	1, 2, 5
'The Role of Culture in Climate Change Policy Making' Staff Presentation Secretariat – United Nations Framework Convention on Climate Change (UNFCCC) 29 July 2008, Bonn	1, 2, 3
Morality and Climate Change Policy: How Diverse Worldviews Shape the Dialogue on Climate Change' on Panel: A Global Dialogue on Climate Change? International Communication Association (ICA) Conference 22-26 May 2008, Montreal	1, 2
'Human Nature and the Natural World: Shaping Environmental Policy to Fulfill Humanity's Universal Quest' Greenpeace International Staff Presentation 10 March 2008, Amsterdam	1, 2, 5
Role of Culture in Climate Change Discourse: Appealing to Universal Motivators to Address a Universal Crisis' Communicating Climate Change Conference: Universidade do Minho 19-20 November 2007, Braga Portugal	1, 2, 5

H. Trans-Disciplinary Research

Our understanding of humankind's interaction with the environment is evolving rapidly and from many directions – both within and outside of academia. Yet, too often within academia, this understanding is weakened by the artificial walls separating disciplines. During my research, I often found similar conclusions drawn by scholars of different disciplines who seemed to have no knowledge of the work of the other. Wicked problems, such as the anthropogenic dimension of climate change, can not be effectively understood through these traditional mono– or even multi–disciplinary approaches. True cooperation between disciplines could exponentially enrich our total understanding of human phenomena, such as climate change. Wilson (1984: 81, 1999: 230) has passionately argued for *consilience*, i.e., the convergence of science and the arts in academic study, to study human nature:

> "The fiery circle of disciplines will be closed if science looks at the inward journey of the artist's mind, making art and culture objects of study in the biological mode, and if the artist and critic are informed of the workings of the mind and the natural world as illuminated by the scientific method. In principle at least, nothing can be denied to the humanities, nothing to science…. interpretation is the logical channel of consilient explanation between science and the arts."

Fortunately, this cooperation is improving in some areas of academia as scholars in the humanities, natural sciences, and social sciences form inter–disciplinary working groups on fundamental issues, such as climate change. Examples include academic institutions, such as the University of East Anglia's *School of Environmental Sciences,* Vrije Universiteit's *Institute for Environmental Studies*, Tuft University's *Center for Environmental and Resource Policy*, Berkeley's *Department of Environmental Science, Policy, and Management*, and Yale's *Project on Climate Change*, as well as scholarly associations, such as the Association for Environmental Studies and Sciences[19]. The conference on climate change in Copenhagen, mentioned above,[20] brought together scholars from literally every branch of academia. However, many were disappointed that the constructive suggestions and conclusions of social sci-

[19] www.aess.info. AESS uses Consilience as an organizing principle.

[20] Climate Change Global Risks, Challenges & Decisions (IARU) Conference, Copenhagen, 10–12 March 2009, http://climatecongress.ku.dk/

ence and humanities branches were not given the same weight as the simple "doom and gloom" results of the natural scientists (Hulme et al. 2009).

Yet, even an inter–disciplinary approach, which relies solely on academic publications, cannot fully reflect the totality of knowledge of such a rapidly evolving issue. Outside of academia, a quickly expanding web of foundations, non–profit advocacy groups, bloggers, and community organizations devoted to social and environmental issues are researching, publishing, and teaching (Hawken 2007). While many of these groups approach cooperation with other groups from their own unique issue, e.g., "save the salmon", these groups are quickly recognizing that collective power will likely further their own goals (see example in Chapter Three on cooperation between labor and environmental groups). Mander (2006) argues for this kind of cross–agency cooperation when he claims that all issues of social and environmental justice touch indigenous rights and, therefore, these rights should be taken into consideration by all other groups. Hamelink (2010) argues for a *trans–disciplinary* approach, which includes experiential and tacit knowledge from non–scientific sources, along with academic knowledge, so long that these "gray" sources are properly identified in academic work. This type of trans–disciplinary, cross–dependent work – within and outside of academia, as well as in cooperation between the two – is crucial to understanding and addressing climate change and the wider context of social and environmental justice.

My resulting dissertation is broad and trans–disciplinary by necessity, yet grounded firmly within the very classic *consilience* academic tradition of the earliest academics from ancient Greece through the Enlightenment (Wilson 1999), reflecting both relevant findings from a broad range of academic disciplines, as well as mass media and my own 20 years of experience working with and studying international private and civil organizations, some of which was discussed earlier. My research is grounded in the humanist and social science traditions of communication studies – particularly intercultural, environmental, and political communication, as well as rhetorical, frame, and metaphor analysis. Yet, I would be remiss not to note the many theories, drawn from disciplines across academia, which have greatly influenced my work. I list them below, not to claim expertise in all these areas, but in recognition of the richness of knowledge that inter-disciplinary research can draw from when given free reign:

I. Anthropology – Cultural Identity, Cultural Relativism and Universalism: Barthes 1998, Boas 1911 (1938), Brown 1991, 2004, Campbell 1949, 1988, Douglas & Wildavsky 1982, LeVine & Campbell 1971/1972, Malik 2000, Mead 1956, 1970, Smith 1958, Textor 1967; Cultural Linguistics: Palmer 1996

II. Communication and Linguistics – Noam Chomsky 1984, 2002, 2003; Framing and Metaphor: Lakoff 1987, 2006 a,b, Lakoff & Johnson 1980; Constitutive Rhetoric: Charland 1987, Metaphor Analysis: Schmitt 2005; Worldviews and Culture: Hall 1976, Singer 1987; Environmental Communication: Cox 2010; Terministic Screens: Burke 1966

III. Ecology – Deep Ecology: Berry 1993, 2001, 2005, Carson 1962, Cramer 1998, McKibben 1989, 1995, 2007

IV. Economics – Natural Capital: Hawken et al. 1999; McDonough and Braungart 2002; Anti–Globalization: Bauman 1998, Klein 2007, Shiva 1993, Stiglitz 2002; Corporate Colonialism: Korton 1995; Alternative Globalization: Hawken 2007, Mander and Tauli–Corpuz 2006; Free Market Capitalism: Bhagwati 2004, Freidman 1962, Friedman, T. 2000, 2006; Market Fundamentalism and Ideological Imperialism: Soros 1998

V. Evolutionary and Socio–Biology, Biophilia, Worldviews and Human Nature: Clark 2002, Wilson 1978, 1984, 1999

VI. Geography – Human Dimensions of the Environment: Hulme 2009

VII. History – Environmental History: White 1967

VIII. Political Science – Political Discourse Analysis: Dryzek 1997, Edelman 1964, 1985, Hajer 1996, Hajer & Versteeg 2005; Ecological Modernization: Hajer 1996; Political Philosophy, Ecological Citizenship: Dobson 2004; Distributive Justice and Differentiated Responsibility: Müller 2002a, b, Müller et al. 2007; Global Environmental Politics Porter et al. 2000; Wicked Problems: Rittel and Webber 1973

IX. Psychology – Flow: Csíkszentmihályi 1990; Positive Psychology: Haidt 2006, Inglehart et al. 2008, Maiteny 2000, Rudin 2006, Seligman et al. 2005; Evolutionary Psychology and Human Nature: Pinker 2002, 2008; Archetypes: Jung (1936 (1969)); Personality Construct: Kelly 1955, 1970

X. Religious Studies – Religion and Nature: Næss 1973, Taylor 2001 a,b

XI. Sociology – Parsons & Smelser 1956; Tellegen & Wolsink 1998; Social Construction: Berger & Luckmann 1966, Bird 1987, Gergen 1996, Latour 2005, Latour & Woolgar 1979, Sarbin and Kitsuse 1994; Global Interpretive Frame Transformation: Snow et al. 1986, Snow & Ben-

ford 1988, 2000; Meaning Making: Tilly 2006; Social Movement: DeLanda 2006, Hawken 2007, McDonald 2008, Turner & Killian 1972, Turner 1996

I. Challenges

Throughout the research and writing of this dissertation, I struggled to pin down a subject that never stood still. Not only was the scientific understanding of the causes, effects, and timelines of anthropogenic climate change in constant flux, but the social phenomena of climate change morphed as public awareness soared, and public policy gyrated across the world. As this scientific, social, and cultural phenomena developed, the world economy went from seemingly healthy to forebodingly bad, dragged down initially by a crash in the real estate and financial markets in the U.S., which reverberated around the world. Beyond the loss of jobs and personal savings, the current economic crisis threatened to destroy the very market ideology that built globalization – the zealous beliefs in human superiority, scientific control, progress, and profit of a free market global capitalistic system unrestrained by regulation to meet all public needs. Although the pending "collapse of capitalism" was not a new idea – Marx first predicted it in the mid–19th century, and Soros (1998) warned against it in the late 20th century – the actual collapse of this ideology was unimaginable when I started this dissertation four years ago. Yet, even bastions of free market global capitalism, such as Fortune Magazine (Tetzeli 2009), now predict massive and lasting changes in the way businesses will be run and regulated. Globalization advocate Thomas Friedman (1999, 2000, 2006) now links the ecological and financial crises as two sides of the same coin (2009a, b, c).

Despite the culpability of the West in these crises, however, the global economic system may recover without any significant changes or reduced dominance because, as progressive activists rightly note: "the establishment's strength is its ability to simply exclude alternatives from serious consideration" (Borosage & vanden Heuvel 2008: 5). Yet, despite its failings, the western worldview has been institutionalized so successfully that the belief in privatization over public services has remained intact in the United States, to the point that even the most liberal politicians wouldn't dispute the assumption. Following are two examples from 2009/2010.

I. A public policy debate in early 2009 on universal access to health care quickly morphed into a discussion and subsequent law, which required everyone to have health insurance. This rhetorical shift

from care (public need) to insurance (private sector product) and from access (right) to requirement (obligation) went largely unnoticed in the media. Even though the government is portrayed in the United States to be much less efficient than the private sector at offering services, the private sector screamed when it thought it would have to compete with them to provide affordable health care. Amongst those who rejected the idea of universal, socialized health care systems were many who refused to give up Medicare, the universal, socialized health care system for those over 65 years of age.

II. The U.S. government's rescue of General Motors, the largest automobile manufacturer, from bankruptcy around the same time, was met with an absolute rejection to the idea that the government could ever run a company and predictions of how much taxpayer money it would lose. Despite these dire predictions, however, the government task force turned GM around to profitability in less than a year, something that had eluded GM's corporate managers for decades. Yet, the extraordinary role that the government played is being deliberately downplayed (Vlasic 2010) for fear that it "could have a negative effect on the value of the American taxpayers' stake in a publicly traded company." So, the government pulls off an amazing turnaround in the private sector, yet advertising this would hurt the company's image? The free market bastion, The Economist (2010), issued a grudging reply, which in essence claimed the government had simply narrowly avoided disaster, despite having completely written off GM less than fifteen months earlier from private sector mismanagement (The Economist 2009).

In the area of climate change, potential solutions to climate change grounded in deep ecology beliefs, e.g., regional food systems, local, common control of resources, continued to be dismissed and marginalized by western political and business leaders as insufficient, quaint, elitist. Despite the fact that "in one hour, enough sunlight strikes the Earth to provide the entire planet's energy needs for one year," (MIT News 2008) and researchers at MIT believe they are less than a decade from using sunlight to solve the world's energy problems on a very local basis, money continues to pour into developing largely untested and instinctually unwise and dangerous technologies to pump carbon into the soil and oceans (carbon capture and storage CCS), seed the clouds, and split atoms into nuclear energy. These increasingly desperate attempts to address climate change in the same par-

adigm, which created it in the first place, will only drive us further away from real, long term solutions. One only needs to look at how we "solved" the hole in the ozone, replacing the chemical that created the hole with one which exponentially accelerated climate change multitudes beyond the effects of simply carbon dioxide[21]. Ironically, the more deep ecology types of solutions are dismissed on the very basis, which makes the western system unsustainable – lack of centralization, control, measurement, and scalability. Even when potentially–local solutions, such as solar, are discussed, it is usually on a large scale basis, with enormous solar panel fields in arid zones, central power stations, and pipelines. The simple truth is that there is simply no way for the global private enterprises to make money on local systems. This conflict of interest seems obvious upon reading, yet it is rarely brought to light. There is simply too much to be lost by those organizations and investors who control the global energy, agriculture, and intellectual property industries.

Perhaps an understanding of humankind's universal quests for meaning, community, and visceral contact with nature will eventually transform this western system. However, given the overwhelming power of the deep frames of the dominant worldview to frame the very discourse of climate change and its potential solutions, and the decentralized nature of the deep ecology movement, how much chance is there that our system will eventually be driven more by universal quests for meaning, community, and nature? That question will only be able to be fully answered in the future and in hindsight. However, the final chapter of this dissertation will look at what factors may catalyze such a shift.

Ultimately, I argue that climate change is part of a broader set of environmental and social issues stemming from specific, ingrained beliefs of the western worldview. While the western worldview has been universalized

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[21] The substances most commonly used to replace CFCs, hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs) are unfortunately thought to be potent contributors to anthropogenic climate change (many times more potent, although less total impact, than CO2). The Montreal Protocol includes a phase–out of HCFCs by 2030, but it does not address HFCs at all. It is important to note, however, that "This quantitative success in the protection of the ozone layer has also achieved important climate benefits because many ozone depleting substances controlled under the Protocol are also potent greenhouse gases. It is estimated that, without the worldwide effort to protect the ozone layer, the greenhouse effect of global ODS emissions would have equalled carbon dioxide emissions, currently the greenhouse gas contributing most significantly to climate change" (United Nations Department of Economic and Social Affairs 2008).

and other worldviews marginalized, it fails to fully meet universal human quests. Understanding the chasm between the western worldview and these universal human quests – and how it can be breeched – can provide valuable clues to address anthropogenic climate change and prevent further environmental harm.

J. Structure

This dissertation is broken down into three sections.

Section One: Theoretical Foundation

Chapter One: Worldviews & the Cultural Answers to Universal Questions

This chapter lays the theoretical foundation for how worldviews are shaped in the first place, focusing on the theory, discourse, and interaction between cultural relativism, social determinism, culture, and universalism. The chapter then looks at key universal quests of all humankind: for meaning (Campbell 1949, Tilly 2006), purpose (Csíkszentmihályi 1990), community, (Maiteny 2000, Haidt 2006, Seligman et al. 2005), and physical contact with nature (Næss 1973, Weinstein et al. 2009, Wilson 1984). The chapter then closes with a look at how the concepts of cultural relativism, social determinism, and culture have been abused and misconstrued, namely through the industry of cultural difference, identity politics, and false choice discourse.

Section Two: Diagnostic Framing: Define the Problem and Causes (Framing Task One)

Chapter Two: Western Worldview & the Universalization of a Culture

According to Dilthey (1910 (2002): 29) and Hajer (2006), worldviews are best studied from an historical perspective. This chapter traces how the historical influences of the western worldview – Protestant monotheism and western science – came together in Europe and gave rise to the free market capitalism and globalization, which converged in the United States and was then exported back out to the rest of the world in the second half of the twentieth century. The chapter then looks at western ideas of ownership, personhood, growth, standardization, centralized decision making, justice, and happiness and how these concepts came to be universalized around the world through cultural, economic, and ideological imperialism. The chapter closes with criticisms of and responses to this kind of analysis.

Chapter Three: Western Construction of Climate Change

Chapter Three traces two western deep frames throughout the development of the scientific and social phenomena of anthropogenic climate change in the West, most particularly in the United States – Humankind as Steward and Nature as Controllable – identifying some of the false choices and assumptions therein, as well as how these frames reflect the tenets of the *dominant worldview*.

Chapter Four: The ÜberFrame: One World Market

Chapter Four identifies the third deep frame – an *überframe* – "One World Market", which shapes the very way in which the problems of and solutions for social and environmental crises are constructed within the private, public, and parts of the civil sectors, as well as how this frame reflects the tenets of the *dominant worldview*.

Section Three: Prognostic and Motivational Framing: Understand Why Others Would Participate, Articulate a Solution and Provide Tools to Implement It (Framing Tasks Two and Three)

Chapter Five: The Catalytic Potential of Climate Change

Finally, Chapter Five uses the universal quests of humankind identified in Chapter One to finally shed some understanding about why others might take action (Task Two), looking at what alternative – yet to-date largely marginalized – solutions and tools could address climate change and its auxiliary issues (Task Three). The chapter concludes with a look at the forces which are working both for and against such a substantive, long–term shift in the *dominant worldview*.

K. Caveats

While this dissertation focuses heavily on two worldviews: the *dominant worldview* and the insurgent Gaian *deep ecology* worldview (Næss 1973, Devall & Sessions 1985: 69, Cramer 1998: 8), I do not argue that no other worldviews are to be found. To the contrary, cultural theorists, theologians, and philosophers have identified anywhere from a handful (based on broad religious categories) to an infinite number (based on the unique set of personal cultural identities each individual possesses) of worldviews, depending on how "worldview" is defined. These two worldviews were specifically chosen out of the infinite possibilities. My dissertation focuses first on the western worldview because it is the dominant worldview in the nations

most responsible for the anthropogenic component of climate change and because it has been universalized and institutionalized to such an extent that it shapes policy and societies around the world, regardless of whether or not the individuals it affects subscribe to its core beliefs.

In particular I focused on the United States as my object of study for two reasons. First, the historical influences behind this dominant worldview converged in the founding principles of the United States (Devall and Sessions 1985), and became the worldview's most extreme expression. Secondly, the United States simply had the power in the 60 years following WWII to impose its particular worldview upon the world during the creating and rule making of global organizations, such as the Bretton Woods institutions (International Monetary Fund and World Bank), World Trade Organization (WTO), and United Nations agencies, including the Security Council, World Intellectual Property Organization (WIPO), and Global Compact. The United States Department of Defense continues to see, "America's interests… inextricably linked to the integrity and resilience of the international system; (interests in)… security, prosperity, broad respect for universal values, and an international order that promotes cooperative action, (which)…require armed forces with unmatched capabilities and a willingness on the part of the nation to employ them in defense of our interests and the common good…(We have) an obligation to be responsible stewards of the power and influence that history, determination, and circumstance have provided" (2010: iv). Power may eventually shift away from the U.S., as China begins to exercise its power and the U.S. collapses under its own crises, but the changes will likely be in who wields that power, not in the underlying rules[22].

My dissertation focuses in turn on the Gaian *deep ecology* worldview both because it is the most ancient – and perhaps, thus, universal – and because the sustainable, community–oriented way of life grounded in this worldview may simultaneously address climate change and fulfill the universal quests of humankind. Deep ecologists, and their empathy with indigenous cultures, are sometimes accused of a naïve western love of nature (van Ginneken 2003: 106) that eulogize indigenous cultures as living in perfect har-

[22] Although I look at the historical development of the specific incarnation of the western worldview in the United States, this dissertation – like any other heuristic research – "does not seek to predict or to determine causal relationships" (Moustakas 1990: 14). I do not argue that this worldview caused particular world events, nor that the worldview which developed was an inevitable result of world events.

mony with nature. Yet, the inclusion of indigenous peoples in this worldview does not infer that this worldview holds some naïve love of nature, but rather it retains a better understanding of humankind vis–à–vis the natural world, and from that arises a humility about its inability to control it, which the West has lost. This loss of humility – or species exceptionalism – leads us to talk of "saving the Earth", when in fact Earth will survive. It is humankind as a species, which Earth may evolve out of supporting. It is our own survival – not Earth's – that makes addressing climate change urgent for us.

Secondly, I fully recognize that any move towards decentralization and bioregionalism risks all of the dangers of tribalism, exceptionalism, and culturally relative conflicts I discuss in more detail in Chapter One. However, there is simply no room in this dissertation to fully address this. It would, however, be a fascinating topic for future research. Instead, I will simply say here that I would not predict – nor prescribe – a return to fatalism, primitive living, or spiritual conversion back to some kind of romanticized version of Mother Earth. Any shift towards deep ecology bio-regionalism will be done within a society already aware of the larger world and accustomed to virtually instantaneous access to information from around the globe. Any new paradigm must incorporate some combination of physical locality and virtual globalization.

First and foremost this dissertation seeks to illuminate the deep, unquestioned frames which are shaping climate change discourse today. Only by recognizing them and challenging them can we hope to move outside them. This is the first step – defining the problem and causes – in Snow and Benford's *global interpretive frame transformation*. Secondly, addressing climate change is too often portrayed in the negative, e.g., sacrifice to "save the Earth" instead of identifying seeing climate change as a metaphor of our unhappiness and showing how a shift towards re–localization can fulfill our needs for meaning, purpose, engagement, and connection with the natural world. Making this connection builds a vital bridge between the research on deep ecology and the disparate research on happiness coming out of positive psychology, evolutionary biology, and comparative religion. This is Snow and Benford's second step – understanding why others would change. And, finally, we look across a wide body of knowledge – both within academia, as well as the non–profit world and communication agencies – to predict what solutions, strategies, and tactics could address the problem, thus completing the third and final step of *global interpretive frame transfor-*

mation. For, ultimately, the western world needs to re–vision a healthier view of humankind's place in the natural world; not as the anthropogenic alpha dog ruler (McKibben 1989), but as an inextricable participant who respects an inherent complexity, which we only barely grasp. After all, humankind remains:

> "different from the rest of the natural order, for the single reason that we possess the *possibility* of self–restraint, of choosing some other way" (McKibben 1989: p. xx, *my emphasis*).

Section One: Theoretical Foundation

ONE

Worldviews as Cultural Answers to Universal Questions

> "What people do about their ecology depends on what they think about themselves in relation to things around them. (It) is deeply conditioned by our beliefs about nature and destiny…that is, by religion" — White (1967: 1205)

> "Human culture can only function through links and reciprocal relations with nature" — (Bate 2000)

Since the Neanderthals first became aware of the inevitability of death (Armstrong 2005)[23], humankind has struggled to answer the same timeless and transcendent universal mysteries of life: Who am I?, From where do I come?, What happens when I die?, What is my relationship to the world around me – the spiritual world, the social (human) world, the natural world? (Campbell 1959, 1988). In short, 'what is the meaning of life'? The first part of this chapter looks at how worldviews are created as humankind searches for this meaning through purposeful engagement in conjunction with community and contact with the natural world. The second part of the chapter looks at the ages old debate between the relative salience of universal human questions and culturally relative answers. The chapter closes with a discussion about how the concept of cultural relativism has been misconstrued and misused. The misuse of univer-

[23] Anthropologists are still debating whether the cognitive traits which define humankind include or post-date the Neanderthals. My dissertation is not attempting to join in this debate, but merely to point out that this search for meaning is part of the *behavioral modernity*, which has always characterized humankind. For those interested in this debate, however, Nowell (2010) provides an excellent summary. Modern evolutionary biologists, such as Wilson (1984) suggested that culture was the sole differentiator between humans and animals. However, Boas (1911 (1938): 163–4) argued that while animals possessed some elements of culture, it was humankind's "power of reasoning, the use of language, and evaluation of actions from ethical and aesthetic viewpoints …(that was) peculiar to man." More recent research found an area of the brain – associated with strategic planning, decision making, and multi-tasking – which is unique to humans (Neubert et al. 2014).

salism will be discussed in Chapter Two.

A. Humankind's Search for Meaning

Answers to the universal questions of life are greatly influenced by local geography (Boas 1911 (1938), Dilthey 1923 (1988), Geertz 1957, 1973, Hall 1976, Mead 1956, 1970). Whiting (1964 (1994)) found common cultural practices across similar climates, while Textor (1967) linked cultural differences to ecological differences. Sapolsky (2005) later argued that the physical dominance of the sun in Africa and the Middle East led to monotheism, and its harsh climate led to warrior cultures. In contrast, the relative bounty of rain forest regions around the world led to more community-oriented cultures, which worshipped multiple deities.

As a verbal and social animal, humankind does not seek to answer these questions in isolation but in rhetorical negotiation within a cultural group (Berger & Luckmann 1966, Bird 1987, Gergen 1996, O'Brien & Kollack 2001, Sarbin & Kitsuse 1994). Answers about the meaning of life are mutually and rhetorically constructed (Carey 1989, Charland 1987, Craig 2001, 2006) among societal groups sharing time and space (Tilly 2006). Culture, communication, and physical geography are all mutually constructed; each influences the other. Physical environment shapes culture, just as culture influences how we see the environment. Our physical environment shapes the way we communicate about it, just as the way we communicate shapes the way we construct our environment. Communication verbalizes our cultural views as culture shapes how we communicate, both of which have been shaped by and will constitute how we see our environment.

> "Whenever we speak or write, we actively participate in constituting our world…Rhetoric's constitutive force…characterize(s) a set of facts or a condition in the world one way rather than another and therefore…name(s) it as a problem or not" (Cox 2010: 62–63).

This mutual, rhetorical process is universal; culture and the rhetorical construction of our environment seek to answer the transcendent universal questions identified by Campbell. Regardless of physical place or temporal space, all cultural answers attempt to answer the same universal questions.

These culturally-constructed answers shape the "cognitive orientation of a society" (Palmer 1996: 113–4), constituting both a group's perceptions of the world and the ways in which they speak of it. Burke (1966) spoke of *termin-*

istic screens, those subjective filters in the realm between the individual and the universal through which we see our own version of "reality"[24]. Cox (2010) later equated Burke's *terministic screens* to worldviews, the collection of beliefs shared by a cultural group. These worldviews constitute 'reality' and deflect – or marginalize – other possible interpretations of 'reality'. Worldviews are unconsciously held and go largely unquestioned (Jung 1936 (1969), Singer 1988). Clark (2002) uses the metaphor of spectacles; the unseen subjective lens through which humankind perceives its world. Even though individuals in any given social group may hold a diverse set of worldviews, every cultural group institutionalizes one more predominant worldview, against which conformity is rewarded (Parsons & Smelser 1956).

Humankind's conceptual system relies heavily upon the use of metaphor to make itself understood to others (Lakoff & Johnson 1980, O'Brien & Kollack 2001: 9). So, we create stories to construct, communicate, and pass on these answers (Gergen 1996). To tell stories is to be human (Gerringer 2006), and the way we construct stories is universal (Vogler 1998). Jung (1936 (1969): 8, 43, *paraphrased*) identified several archetypes – "collective, universal, eternal, inherited and unconscious images identical in all humans". Campbell (1949) used them to try to explain why similar images reoccurred in countless myths around the world and throughout the ages and eventually concluded that these images were metaphors for collective mythologies – or the common societal dreams (1988: 48). Conflict between cultures is found in the *details* – the myths, storytelling, and rituals – of their answers; not in the underlying questions they seek to understand. Conflict occurs between cultural groups, which interpret their myths as real, not metaphorical (Campbell 1949, 1988). Conversely, LeBaron (2006) has shown how turning points in conflict transformation are also often metaphorical.

Through his analysis of thousands of myths across time and space, Campbell discovered that a universal *monomyth* (1949: 30), which marks the milestones of life: "birth, coming of age, finding a partner and raising a family, growing old and dying" (Gerringer 2006: 19), dominates the myths we tell to explain the world. According Vogler (1998: 10):

[24] This is reminiscent of the Blind Men and Elephant parable in which the elephant is "truth" and the blind men are religious leaders, each interpreting their truth based on what part of the elephant they can touch.

> "The pattern of the Hero's Journey is universal, occurring in every culture, every time. It is as infinitely varied as the human race itself and yet its basic form remains constant…stories built on the model of the Hero's Journey have an appeal that can be felt by everyone because they deal with the childlike universal questions: Who am I? Where did I come from? Where will I go when I die? What is good and what is evil? What must I do about it? What will tomorrow be like? Where did yesterday go? Is there anybody else out there?"

Not coincidentally, the most successful films worldwide, e.g., *Avatar, Star Wars, Indiana Jones, Harry Potter,* and *The Lord of the Rings,* continue to be stories of heroes' journeys (Internet Movie Database 2014), where the "cosmological and sociological functions of myth play out onscreen" (Gerringer 2006: 19). Even the highest grossing films made outside of mainstream western media, e.g., *Wo hu cang long (Crouching Tiger, Hidden Dragon), La Vita è Bella (Life is Beautiful),* and *Ying xiong (Hero)*[25] have been either martial arts fantasies or stories of unusual heroes appealing to these elements. As one blogger describes, *Crouching Tiger, Hidden Dragon* is "putatively set in 19th century China, but it could be anywhere, anywhen" (Santoro 2001). Rosteck and Frentz (2009) argue that the film *An Inconvenient Truth* also follows the steps of a classic hero's journey, with Al Gore playing the hero.

From his research, Campbell noted that humankind finds its own meaning through purpose, i.e., each person's own unique reason for being placed on Earth. He called the search for this purpose "following your bliss" (1949: 151). Csíkszentmihályi's (1990) subsequent research studied this notion, as well as Maslow's (1964 (1994)) notion of "peak experiences," from a psychology perspective and sparked the entirely new sub-discipline of positive psychology, which looks at drivers of human happiness, defined not as fleeting moments of joy, but of lasting contentment. Csíkszentmihályi (1990) talked of *flow*, the deep satisfaction humankind derives from total absorption on a challenging task and found these "optimal experiences were described in the same way by men and women, by young and old, regardless

[25] www.tqnyc.org/NYC040592/statistics/toptenforeignlanguage.html, www.indiewire.com/biz/biz_041222world.html, www.listsofbests.com/list/1887

of cultural differences" (p. 4).[26]

Nakamura and Csíkszentmihályi (2002: 87) later found, however, that flow created meaning only when the task was seen as part of a larger community. This feeling of actively contributing unique skills and time to the accomplishment of the larger mission of their community was termed *vital engagement* (Kahneman et al. 2004). While the flow activity itself may be individualistic in practice, meaning, and purpose are only found in relation to a wider community; meaning ultimately comes through understanding our unique role in, and relationship to, a wider society (Deci & Ryan 2000, Seligman et al. 2005). Haidt (2006: 238, 242, *my emphasis*) later found that:

> "(while humankind was) shaped by individual selection to be selfish creatures who struggle for resources, pleasure, and prestige, we were shaped by group selection to be hive creatures who long to lose ourselves in something larger. We are social creatures who need love and attachments, and we are industrious creatures with needs for effectance, able to enter a state of vital engagement (i.e., flow) with our work…whenever groups of people come together to try and change the world…they are pursuing a vision of virtue, justice or sacredness."

While cultural answers to the universal questions of life are shaped by the unique geography of a cultural group, Maslow (1964 (1994)) understood

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[26] Museum designers know that the art of engaging visitors in an often–times complex subject lies in understanding what originally hooked the experts on their specific passion, whether it be sports or plants, ancient history or modern science. Inevitably, their passion was sparked by something that happened when they were about 12 or 13 years old (not coincidentally, this is the same age targeted by the "hero" movies mentioned above). Once the designer understands what hooked these professionals to their chosen field – what they found when they followed their bliss – that hook can be used to engage lay visitors into the subject. The complex subject matter is reduced to its purest, most engaging elements. Some examples follow: I.While designing the Abraham Lincoln Presidential Library and Museum, the historians disclosed that the sense of discovery they experience when delving into old documents and books — the possibility that they could discover something that no one else had noticed about Lincoln before them — drove them into history and the study of Lincoln himself. II.Jane Goodall's love of chimpanzees stemmed from her favorite childhood books: The Story of Dr. Doolittle, The Jungle Book, and Tarzan. She dreamed of one day becoming a literal "Jane of the Jungle." By the age of eleven, Dr. Goodall dreamed of going to Africa to live with animals, which was a radical aspiration for a young girl in the 1940s. III. A top British volcanologist revealed that a single teacher and a field trip to the Lake District when he was twelve years old sparked the amazing career that led him to climb volcanoes on six continents, culminating in an expedition to Antarctica.

that *peak experience* – and the *self actualization* that is attained through finding meaning, purpose, and community – can only be fulfilled in contact with this same natural world. Not only does the natural world shape the meaning we derive from the natural world, the natural world nurtures humankind in its quest for meaning. Wilson's (1984) seminal work on *biophilia* found that humankind is universally drawn to seek out contact with nature because there is a complexity, a balance, and a mystery to the natural world that humankind can never recreate.

> "Our intrinsic emotions drive us to search for fresh habitats, to cross unexplored terrain, but we still crave the sense of a mysterious world stretching infinitely beyond…(we) react more quickly and fully to organisms than to machines…prefer(ring) entities that are complicated, growing, and sufficiently unpredictable to be interesting" (Wilson 1984: 76, 116).

This complexity fulfills humans with a deep sense of belonging and inspiration. Throughout the ages, innovators in a wide variety of fields have studied the natural world for design inspiration (Benyus 2002). In many cases, nature already provides more complex, self–sufficient systems to study, mimic, and test than humankind has yet to create: pharmaceutical anti–cancer plants via primates that automatically find and consume plants with healing compounds; aeronautics navigation techniques from bats, homing pigeons, pets, salmon, and monarch butterflies, which vastly surpasses current aviation technology; waste management constructed wetlands which could act as sewage treatment facilities that clean a community's water while doubling as a wildlife refuge; and edible landscapes, which can sustainably and organically grow a wide variety of food[27].

Furthermore, humankind is universally drawn to sanctuary that millennia ago would have improved its chances of survival. Across time and place, people prefer landscapes with tree groves that provide horizontal canopies, water, elevation changes, distant views, flowers, indications of other people

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[27] Modern society already benefits from several revolutionary products that were inspired by nature — Velcro (barbs on weed seeds); the Sydney Opera House (milkweed pods and sea shells); the telephone (the human tongue and ear drum); and, of course, the most famous of all bird–watchers – the Wright Brothers. In an ironic twist, habitat design principles originated by humans, based on lessons from the natural world, are being employed to design more natural, yet artificial, animal enclosures for zoos and aquariums (Browning 2003, Heerwagen & Orians 1993, Kellert & Wilson 1993).

or inhabited structures — all elements that indicate possible food, shelter, and places to explore. They make a human–made environment more habitable. Even artificial human habitats – such as schools and offices – that are intriguing, variable, safe, comfortable, beautiful, and green inspire more effective learning, working, and living (Eisenberg & Reed 2003, Sterling & Sterling 1983). In a study performed by Heschong Mahone Group (1999), elementary school students in classrooms with the most (diffuse) daylight showed a 21 percent improvement in learning rates compared to students in classrooms with the least daylight. A Lawrence Berkeley National Laboratory study (Kumar & Fisk 2002) found that U.S. businesses could save as much as US$58 billion in lost sick time and gain an additional US$200 billion in worker performance if improvements were made to indoor air quality. A study by Herman–Miller (2004) showed up to a seven percent increase in worker productivity following a move to a plant–filled, day–lit facility. After moving into the new building, workers were more excited about work, in better spirits at work, felt less fatigue, and rated their job satisfaction higher (Kats et al. 2003).

When Haidt (2006) looked at how the human brain neurologically responds to various types of contact with nature, he found that, while exposure to visual images of the natural world triggered oxytocin, the neurotransmitter associated with bonding, only *vital engagement* – physical, visceral contact – with wild nature triggered the neurological impulse associated with action. Interdisciplinary research on childhood predictors of adult environmental behavior found a direct correlation between the time children spent engaged in this kind of physical, visceral *vital engagement* in the natural world and both their psychological and physical well-being as children and positive environmental behaviors as adults (Louv 2007, Maiteny 2000, Moore & Cosco 2007, Wells & Lekies 2006).

In summary, all humankind shares a quest for meaning in life. This meaning is created through the discovery and purposeful engagement in contribution to a larger community. Meaning is mutually constructed and inspired by vital engagement in the natural world. The collective meaning we construct to make ourselves understood to others in our social group are communicated as rhetorical stories, heavy in metaphor: our cultural myths. While cultural myths diverge widely across geography and time, they all seek to answer the same universal questions. Clues to universal human nature lie within the universality of our quest.

B. Universalism and Culture

The relationship between humankind's universal questions (human nature) and culturally–constructed answers (worldviews) has driven philosophical debate about the relative salience of each for centuries (Hunt 1994). Is humankind born with significant universal traits (nature) or are individuals more significantly shaped by their cultural environment (nurture)? The following two sections look at each side of this interrelated relationship in turn. The first section explores concepts of universalism and human nature, while the second explores concepts of culture, cultural identity, and cultural groups.

1. Universal Questions and Human Nature

Concepts of universalism rely on the belief in a salient human nature; the idea that every human being is born with a common set of:

I. Universal moral laws (Kant 1785 (1949))
II. Common biological, psychological, and social characteristics (Hoijer 1954)
III. Shared values (Burke & Stewart 1992)
IV. Human spirit (Kale 1994)
V. Human identity (Littman 1999)
VI. Human propensities (Clark 2002)
VII. Philosophical denominators (Maleuvre 2004)
VIII. Ubiquitous, evolutionary themes (Haidt 2006)
IX. Moral concepts (Pinker 2008)

In the mid twentieth century, cultural anthropologist, George Murdock (1945) identified 67 Universals of Culture - specific, universal concepts common to all people (see Appendix A) based on research of hundreds of cultures. Cleaveland et al. (1979) later narrowed this down to 28 universals in nine specific categories (see Appendix B). Brown (2004: 3) later concluded that all universals stemmed from activity, geography, and evolution, and Connerley and Pedersen (2005) identified ten universal motivators. While the lists vary, they all include ideas of morality, justice, community, and taboos (Pinker 2008). Haidt (2006) identified five universal components – preventing harm, ensuring fairness, loyalty, authority, and sanctity – which protect an individual and hold a community together. Further research

identifies universal ideas of death[28] (Goldenberg et al. 1999, 2001), love, the need to belong, reciprocity (Haidt 2006), wisdom, courage, humanity, justice, temperance, and transcendence (Peterson & Seligman 2004: 13, Seligman et al. 2005: 412). Of course, gossip, "the fascination people have for the small doings of other people (Appiah 2006)" permeates across human cultures.

While each of these virtues is a learned behavior (O'Brien & Kollock 2001), human beings are physically and psychologically predisposed to learn them (Pinker 2002, Wade 2007, Wilson 1978). Socio-biologists and evolutionary psychologists[29] argue that these universal traits are a result of evolution. These traits both enabled our evolution and were shaped by that evolution. All of these behaviors developed through humankind's biological and social evolution out of the universal need to answer why? (Ehrlich 2000, Tilly 2006). Kluckhohn and Strodtbeck (1961) asserted that every cultural group is confronted with the same universal problems, which arise from our interaction with nature, society, and each other.

Although universalist ideas have existed since the ancient Greeks, they were first associated with the Enlightenment (Hall 1979, West 1993, Wood 1991), when scholars sought to free humankind from dogmatic religious and cultural ignorance (Kant 1784). The Enlightenment's key notion was that of reason – given a rational argument and freed from the fear instilled by religious and aristocratic state leaders, humankind would make rational choices. Erasmus, in the sixteenth century, and Kant, in the eighteenth century, argued that humankind would willingly and autonomously subject itself to a universal moral law if such international laws were created and enforced. Kant's argument was later used to justify the League of Nations, United Nations (Schweitzer 1952), and presumably the International Criminal Court. Notions of universalist truth live on through religious, activist, media, and commercial organizations — from missionaries preaching their gospels to activists petitioning for greater representation — and underpin the very concept of the Universal Declaration of Human Rights (United Nations General Assembly 1948), which was passed to protect the "inherent dignity and…equal and inalienable rights of all members of the human family (for) the foundation of freedom, justice and peace in the world".

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[28] The planning group for a museum on mythology focused on the subject of death as a key entry point for the exhibits because "all questions are rooted in death" (Harness 2007).

[29] Wilson (1975) argues these are the same field of study.

In the latter half of the 20th century, despite a growing respect for human rights, the concept of universalism began to be challenged as a western concept, which threatened to suppress salient local cultures. In fact, the nature–versus–nurture pendulum swung so far towards cultural relativism – the belief that cultural worldviews were more salient than any kind of universal truths – that when Wilson first introduced the concept of socio-biology (1975), he was blasted as a racist who sympathized with the Social Darwinism and eugenics associated with the Nazis and Communists (1978: xv-xvi). Cultural studies flourished and it became politically incorrect to judge cultural practices outside of their cultural context (Martin & Nakayama 2003).

2. Cultural Relativism

Extreme cultural relativists hold that each individual is born a *blank slate* (Pinker 2002). All knowledge is learned, and every culture creates its own rules and standards depending upon its own circumstances and values (Kale 1994). Right and wrong do not exist; every cultural group should decide for itself what to punish and what to reward (Younkins 2000). Social determinists further hold that cultural values are such strong determining factors that members of any cultural group will inevitably hold the same values (Mackenzie & Stoljar 2000: 54). Detractors of social determinism emphasize that while we may not be able to escape social (cultural) influence, an individual's response to any given circumstance is contingent on many other factors, including intrinsic personalities and dispositions, which alter little throughout our lives (Costa et al. 2000), our own experiences, and perhaps even our mood on any given day[30]. In other words, humans are not societal robots, and any one individual's behavior is not pre–determined by societal rules, i.e. socially determined.

a. Concepts of Culture

Cultural relativism relies on the concept of culture itself, an oft–quoted, yet widely misunderstood and misused concept. The term culture is commonly framed as something that is either possessed by educated people (Bourdieu 1993) or an "exotic other," i.e., a set of characteristics held by exotic other peoples, which we — the norm — do not possess (Ashcroft et al. 1998: 85). The former invokes images of wealthy people and the arts, while the latter invokes traditionally anthropological images of half–naked, paint–covered

[30] This argument could explain the diversity of political, social, and religious views within any given culture or society.

bodies, indigenous crafts, and ritual dances[31]. Both frames imply that only certain people possess culture.

Yet, when Frans Boas (1911 (1938)) first brought scientific methodology to the study of anthropology in the early 20th century, he defined culture as:

> "…the totality of the mental and physical reactions and activities that characterize the behavior of the individuals composing a social group collectively and individually in relation to their natural environment, to other groups, to members of the group itself and of each individual to himself…(and)…the products of these activities and their role in the life of the groups…(p. 159)".

Geertz (1973: 89) defined it as "a system of inherited conceptions expressed in symbolic forms by means of which people communicate, perpetuate, and develop their knowledge about and attitudes toward life". Merriam–Webster (2007) defines it as "a set of shared attitudes, values, goals, and practices that characterize an institution, organization, field, activity, or society". These definitions view culture as a set of ideas and behaviors that define a group of people by gender, ethnicity, nationality, language, occupation, age, sports, hobbies, and/or even a passing interest.

By these definitions, every human being possesses culture, and no two human beings identify with or are members of precisely the same mix of cultural groups (Singer 2000: 28). Individuals carry multiple cultural identities, which form their own *universally unique whole* (Hamelink 2006a). In addition, each culture is appropriated differently by each individual member, and throughout any individuals' life, the salience of each identity is dependent upon the situation at hand. Some identities may remain in the background our entire lives, only to spring forward in sudden importance upon

[31] Even today, according to the Museum Of World Culture (2009) in Sweden, "European colonialism has also left its mark on the museums method of grouping and classifying people and cultures in terms like civilised vs. primitive and advanced vs. backward. The echo of colonialism in words, images, and objects pervades the museum and its traditions, constituting one of many conflict–ridden areas that call for new approaches."

changing circumstances[32]. Furthermore, culture is constantly evolving and changing as its members construct and reconstruct their perceptions of reality (United Nations Development Programme 2004: 4). Even the most ubiquitous cultural expressions are not always authentic to the most closely associated group[33]. As Appiah (2006: 2) notes:

> "Trying to find some primordially authentic culture can be like peeling an onion…Cultures are made of communities and changes, and the identity of a society can survive through these changes. Societies without change aren't authentic; they're just dead."

Yet, there is a real dissonance between this dynamic nature of culture and the static, inborn[34] anthropological way in which culture is most often spoken. Most research into cultural worldviews remains embedded in cultural anthropology, which developed out of the study of exotic locations distant from normative European cultures (Ashcroft et al. 1998: 85).

b. Cultural Groups

In contrast to the linear and static ways individual and group identities are often categorized and studied, DeLanda (2006) holds that the influencers and members who make up any *social assemblage*, are infinitely complex and constantly evolving. Any given influencer or person can be part of any number of groups at any given time. Groups assemble, evolve, and disassemble dynamically dependent upon the changing needs, which the group addresses. Explosive growth in new communications techniques — blogs, email chain letters, on–line petitioning, instant messaging, video sharing, smart phones, and social networking — has enabled communication and

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[32] In lectures on intercultural communications, I often use the somewhat ridiculous example of eye color. While we notice it, eye color seems of little significance to our identity. Supposed, however, that scientific research one day concluded that people with blue eyes were intellectually superior to those with brown or green eyes. Suddenly, being identified as a "blue–eyed person" would become important. We would likely set up foundations like the Blue Eyed Persons for Advanced Education and admit only those with blue eyes. We would create our own rituals and standards to ensure that only those with blue eyes received priority for education and advancement, citing the scientific research.

[33] For instance, "traditional west African cloths…arrived in the 19th century with the Javanese batiks sold, and often milled, by the Dutch…(and) bagpipes arrived in Scotland through Egypt via the Romans" (United Nations Development Programme 2004: 4).

[34] Some physical characteristics can lead to assigned cultural identities, such as gender, skin color, and eye color. In addition, religious designation can be automatically assigned through both Jewish mothers and Muslim fathers. In the latter case, this is often deemed irrevocable.

identity building of *social assemblages*[35] across traditional boundaries, e.g., expats, deaf people, athletes, and professionals, as well as more harmful groups, such as pedophiles and racists. For example, academics who attend international conferences in their field of expertise may display a number of visible signs of cultural differences, such as those symbols and behaviors identified above. Yet, the participation in those conferences and the writing of conference papers follow a common set of principles and rules, which are judged by their peers.

The interactive, global, yet de–centralized nature of the Internet has transformed the one–to–many model of the *abstract public sphere* (Habermas 1991) from a unidirectional model of "readers, listeners, and viewers" (Habermas 1996: 374) of mass media to a collaborative tool, which allows kindred souls across distance, culture, and language to organize, inform, petition, and fundraise for their causes. Nowhere has this been better illustrated than with the opportunities it provides for the *transnationalization of protest* (Snow 2004: 405) to disseminate information, petition, and fundraise (Avaaz 2009) for a variety of social and environmental issues, such as anti–sweatshop[36], peace, and justice[37]. Some specific examples follow:

I. When a young British girl, Madeleine McCann, was kidnapped in May 2007 at a beach resort in Portugal, her family and friends harnessed the speed and reach of email chain letters and Internet fundraising[38] to draw attention of a worldwide audience. Within 15 days of her abduction, the family's website had drawn 55 million hits (Griffiths 2007) from around the world launching a global search for Madeleine.

II. When Amnesty International[39] wants to petition for the release of political prisoners around the world or the National Resource De-

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[35] Soros (1998) has argued that global capitalism could only be sustained when balanced by a global society – not a global government, but a global civil society. Korten at al (2002) believe that this *global civil society* was only possible as a result of the "struggle (with) the forces of elite globalization."

[36] www.nosweat.org.uk

[37] www.moveon.org

[38] www.findmadeleine.com

[39] www.amnesty.org/campaign

fense Council[40] wants to protest a dam in Chile, Internet activism provides information dissemination, petitioning, and fundraising opportunities.

III. The 2007 uprising in Burma was fueled by on–line bloggers[41] and digital camera mobile phone users updating the outside world. When the Burmese government wanted to close its borders, it first shut down the Internet providers. This measure was as effective as physically closing the airport or border checkpoints (Mydans 2007).

IV. Micro–credit enablers, such as Kiva.org[42], directly link micro–lenders to micro–loaners, circumventing the IMF, World Bank, and commercial banks, which do not necessarily directly aid small businesses.

The public sphere of the Internet has also fueled *ethical responsibility between strangers* (McDonald 2008), such as the Fair Trade movement for *ethical consumption*, whereby consumers chose products which reflect their own values (Crane & Matten 2007), and *prosumptive conservation*, whereby consumers "co-create the nature they wish to conserve" (Büscher and Igoe 2013: 288). It can be argued that the basis for these decisions are consequential, i.e., Benthamian (right because of the consequences) or deontological, i.e., Kantian (right because of a duty to do the right thing). In either case, however, *ethical consumption* and *prosumptive conservation* are grounded in virtue ethics, whereby 'good' purchases reflect a goodness of character (Harrison et al. 2005). Consumers get their everyday commodities while helping other people. These assemblages open up possibilities for radical cultural (social) change, both within groups and the way in which diverse cultural groups may form a common cultural identity around areas of common concern.

c. Ethnocentricity and Stereotypes

A variety of outward symbols are used to distinguish those inside the cultural group from those outside it. Identification with a particular cultural group can play out in many visible ways, e.g., recognized dress code, mode of speaking, and participation in rites. These outward symbols and behaviors are as much to show camaraderie and solidarity among the group as

[40] www.savebiogems.org/patagonia

[41] www.youtube.com

[42] www.kiva.org

they are non–verbal barriers to outsiders and opposing groups. But why are cultural differences important? Why do humans so often define themselves by differences to others? One explanation comes from linguist and philosopher, Noam Chomsky (2003: 62), who believes: "As human beings, we quite naturally take for granted what is similar among human beings and then pay attention to what differentiates us." Hamelink (2006b) believes the spread of modernity, together with the global trend of mixing religion, politics, and the manipulation of mass media, creates an anxiety, which increases the need for an authentic cultural identity, a way to feel special. Too often a divisive religious identity provides this authenticity, reinforcing a feeling of superiority and entitlement over inferior "others".

LeVine and Campbell identified a set of universal stereotypes (1971/1972: 173, *paraphrased*), which illustrate how our ethno–centric viewpoint, that our way is the right one, colors how we judge behavior in other groups, while justifying similar behavior in our groups:

Us	**Them**
Proud, self–respectful, and reverent of the traditions of our ancestors	Egotistical and self–bound. They love themselves more than they love us.
Loyal	Clannish, excluding others.
Moral and clean	Immoral and unclean
Honest and trustworthy among us, but we are not suckers when foreigners try their tricks.	Cheating, dishonest, no moral restraint with us
Brave, stand up for our rights, defend ourselves, and won't be bullied	Aggressive and expansionistic, want to get ahead at our expense
Peaceful, loving - only hating vile enemies	Hostile people who hate us

The current integration debates throughout Europe illustrate this ethnocentricity and these universal stereotypes. Historically–Christian European countries are struggling to integrate non–native ethnicities, especially those from historically–Muslim countries. The former accuse the latter of not accepting "western values" of equality and freedom, while the latter remains appalled by the lack of values in western societies, reflected in high rates of violence, promiscuity, and divorce, as well as a perceived lack of respect

towards elders and community. Each group remains convinced the other lacks values, while believing in their own virtue. Public discussion on the integration of Muslim immigrants into Western European nations sometimes exaggerates these *universal stereotypes* to invoke a discourse of war. One blogger illustrates well how this discourse is used:

> "It has never happened before in human history that an ethnic group voluntarily finances other ethnic groups to advance their culture on their territory to the detriment of their own people. Native Europeans are paying people who openly declare to be our enemies to eradicate our civilization and are told to celebrate this as tolerance" (Bodissy 2007, my emphasis).

Stereotypes are created through a combination of tension between diverse groups, negative experiences, inequalities, perceived threats, and repetitive images portrayed by the media. Over time, stereotypes become widely–accepted cultural truths, even in the face of deviant evidence[43]. We look for "evidence" which supports a stereotype and tend to ignore evidence that contradicts it (Burgess 2003). For members of frequently stereotyped cultures, the stereotype becomes a constant challenge to fight or disprove, instead of being judged on their individual behavior. Negative stereotypes are further perpetuated by both the news and entertainment media (see Entman 2006 for examples); e.g., the video warnings against pick–pocketing on the trams of Amsterdam, pickpocket–actors are always Moroccan, and the victim–actors are always white.

Stereotypes played heavily into the media frenzy, which followed the murder of Dutch filmmaker, Theo van Gogh, on 2 November 2004. The killer was a Dutch Muslim of Moroccan descent, who considered van Gogh's films insulting to the Muslim faith. Van Gogh's films had always been considered provocative to his admirers and tasteless to his detractors. Yet, following his death, even his detractors staunchly defended his films with free

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[43] One of the original designers of Disney's Epcot Center, a permanent world fair located in Orlando, Florida, observed that visitors to the country pavilions typically disliked their own country pavilion while enjoying the others. He speculated this happened because the country pavilions played to common stereotypes, e.g., German beer halls, Japanese pagodas, and Mexican Mariachi bands, which confirmed the stereotypes visitors hold of these countries. Conversely, most visitors resented seeing their own country defined by its stereotypes because they naturally see their own country as more complex.

speech frame saying: "In principle, you should be able to say anything"[44] (Metro 2004a). Ironically, in the same period, the Dutch Minister of Justice called for criminal punishment of a Dutch Muslim imam for exercising his own freedom of speech when he said: "he felt something like happiness when he heard that Theo van Gogh had been murdered"[45] (Metro 2004b).

Yet, stereotypes break down upon inspection. The search for a "typical X" is impossible because there will always be an exception for the uniqueness inherent in any individual. And the harder we look at what makes a so–and–so typical, we realize those characteristics also describe other cultures and are, therefore, not unique to them. As De Swaan (2006) reminds us: "Precisely what makes us feel so unique may be precisely what we have in common with every other group."

C. Misconstruction and Misuse of Cultural Answers

If culture is a "set of shared attitudes, values, goals, and practices that characterize an institution, organization, field, activity, or society" (Merriam–Webster 2007), then *cultural differences* could be defined as 'differences in shared attitudes, values, goals, and practices between societies.' These differences are learned from our societies. Culture is not intrinsic or genetic but something learned and judged through nurture[46]. While studies about cultural difference may be important for some matters of international business and affairs, comparative political scientist Guy Peters (1998: 5) recognizes the "fundamental trade–off between the respective virtues of complexity and generalization." As conflict transformation expert Michelle LeBaron (2003b: 1, *my emphasis*) points out: "Any generalization will apply to *some* members of a group *some* of the time." The challenge and danger, of course, is in understanding to whom and when the generalization applies.

Some cultural differences carry deeper cultural significance than others, but many are simply social practices that have no deeper importance, albeit some can cost multinational organizations time, money, and embarrassment

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[44] Je moet in principp alles kunnen zeggen.

[45] Hij…voelde… iets van blijdschap…toen hij hoorde dat Theo van Gogh was vermoord.

[46] Further evidence comes from research into adopted children who grow up in a land other than their land of origin, and studies of differences between identical twins (Singer 1987). At an individual level, behavioral studies have shown that identical twins raised in different environments display many of the same behaviors (Bouchard et al. 1990).

when they get it wrong.[47] However, cultural differences can be widely misconstrued and misused. The *universal stereotype* and 'war' frames used in the integration debate in many Western European countries highlight alleged cultural differences between the natives and the newcomers. However, the differentiating factor between 'natives' and 'newcomers' is often based on the color of their skin and religious beliefs, not on how long a family has been in the country, their citizenship, nor their language abilities[48]. Language barriers can also compound these relatively superficial differences. With the development of English as an *übertaal* (De Swaan 2006), language can be a unifying force. Its non–native use, however, can also cause confusion in translation both in words and manner of speaking by non–native and native speakers. For instance, Dutch people have a reputation for bluntness. Some would label this a cultural trait. However, this is a combination of learned behavior in which directness is akin to honesty (Horst 1996), as well as a result of the direct construct of the Dutch language. Many Dutch people who work abroad, however, quickly adapt their speaking manner in situations in which directness is not socially acceptable[49]. Finally, while telephony, email, and the Internet may have fueled many new types of *social assemblages*, these virtual forms of communication lack the physical, interpersonal contact of *natural presence* (Nevejan 2007). This decreases trust levels and creates additional opportunities for miscommunication (Thackara 2007). Because this distance often crosses national or regional borders, whether it is multinational organizations transferring employees across the world or individuals participating in a chat room with people they have never met, cultural differences are commonly blamed for miscommunications. However, as many working expats learn, miscommunication and mistrust can happen as easily with their own compatriots as with their "foreign" colleagues. Culture difference is not always the barrier to communication and trust–building; sometimes it's simply physical distance.

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[47] Our marketing department once produced an expensive new line of brochures with a black stripe down the side, a look which echoed death notices in Germany. The black stripe carried no real significant cultural weight in itself, but the practice of using the black line rendered the brochures useless in Germany. The money and credibility it cost could have been mitigated by simple market testing. Of course, it is also important to know that business cards in Japan should be given and received with two hands.

[48] Blaming the cultural differences of recent immigrant groups for a range of social problems is easier than addressing the real fears of increasing economic disparity, decreasing congregations in the native people's own faiths, lack of space, resources, and opportunity.

[49] Those who continue to use the excuse of cultural difference to avoid adjusting their behavior or practices, however, could be accused of abusing cultural relativism.

1. The Industry of Cultural Difference

The anthropological nature of most cultural studies continues to focus on rigid or small scale slices of a specific culture and geography (Binsbergen 1999), which may explain the wide diversity of views within any given society and disprove the social determinists, or simplistic, linear classifications of culture (Hall & Hall 1976). However, while these anthropologically–oriented cultural studies fit everyone in neat little boxes and may be helpful in understanding broad cultural differences at a macro level, these theories ignore the immense complexity inherent in unique individuals[50]. The latter tendency exists outside of anthropology as well. Hofstede's (2001) organizational research quantitatively classifies entire nations along linear and absolute dimensions of beliefs. His simplistic findings represent the entire Arab World and West Africa as homogenous blocks.

Yet, an entire intercultural communications industry and departments within academia have blossomed around these kind of simplistic ideas, filled with academic and commercial training, seminars, and "do–and–taboo" books (Axtell 1993). This industry professes to help avoid conflicts and misunderstandings arising from cultural differences, yet can actually leave its students feeling less at ease with the culture they will be encountering than they would have without the training because they actually reinforce and/or create stereotypes by assigning a standard behavior to a large group of individuals, e.g., "the Dutch do this, the Americans think this" (Krause 1995 provides a good example)[51]. They are more likely to throw up their hands and declare, "cultural difference!" and walk away, assuming people of other cultures are just too different[52]. Misunderstandings are more likely assumed

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[50] Studies of individual behavior within multi–cultural organizations (Gardenswartz et al., 2003) found that: "personal values accounted for a large proportion of individual variation in readiness for contact with others from a different group" (Connerley & Pedersen, 2005: 44), not group–level culture.

[51] When I first visited Japan, these kinds of books and so-called experts on Japan all told me I would be harassed and not taken seriously as a woman. I was to wear very conservative suits and refuse to socialize with my (all male) colleagues after hours because they would take me to "men's clubs". In total contrast, my Japanese business partners and clients could not have been more respectful and professional. Once I let go of the stereotypes I had learned, it turned into an enjoyable and productive trip.

[52] While working as part of a design team for a new type of attraction in Malmo, Sweden, our client asked us to incorporate ideas of both Scandinavian advances in design, as well as their views on nature and the environment. The American designers insisted on incorporating old Nordic mythology, which the clients resisted, because many Americans think of Europeans in a historical sense, while Europeans see themselves very much in the present and future.

to be culturally–based, and therefore, inherent and unsolvable.

2. Identity Politics

The trend towards cultural relativism in the second half of the twentieth century was driven in part by religious and ethnic leaders, who sought to avoid undesirable global policy requirements and mask economic and political interests. Since the adoption of the Universal Declaration of Human Rights (UDHR) by the United Nations General Assembly in 1948, Asian and Islamic nations have attempted to derail full deployment with cultural relativist arguments[53]. They hold that human rights is just another form of western colonialism, a way for the West to keep other nations from their right to economic development (Tharoor 1999/2000).

On this basis, the Cairo Declaration of Human Rights in Islam (CDHRI) of 1990 – created during the Organization of the Islamic Conference – asserted that, because the UDHR was a "western secular concept of Judeo–Christian origin, (it was) incompatible with the sacred Islamic shari'a" (Littman 1999: 1), e.g., Muslim law. In 1993, political leaders of the Association of Southeast Asian Nations (ASEAN) signed the Bangkok Declaration, which proposed that their common Confucian and Buddhist *Asian Values* were instead focused on social, economic, and cultural rights. They contrasted this with individualistic, Christian westerners, who were focused on civil and political rights. Asian Values proponents did not question international legal human rights documents as such; they simply tried to question the emphasis of western countries on civil and political rights.

While the Vienna Declaration (United Nations General Assembly 1993) made room for differences in history, culture, and religion in response to the Cairo and Bangkok Declarations, it held that nations were still responsible for protecting human rights. Governments can stabilize their political powers by meeting people's basic needs and provide moral guidance. However, as Tharoor (1999/2000: 5, 3, *my emphasis*) points out:

> "Objections to the applicability of international human rights standards have all too frequently been voiced by authoritarian rulers

[53] It must be noted that, while the cultural relativist arguments on Asian values and Islam command the most attention of critics, three European nations recently used similar arguments to opt out of human rights requirements imbedded in the new European Constitution (Bilefsky & Castle 2009).

> and power elites to rationalize their violations of human rights—violations that serve primarily, if not solely, to sustain them in power…(the same) regimes who appeal to their own cultural traditions are cheerfully willing to crush culture domestically when it suits them to do so… The problem with the culture argument is that it subsumes all members of a society under a cultural framework that may in fact be inimical to them… the standard is simple: where coercion exists, rights are violated, and these violations must be condemned whatever the traditional justification…It is enough that (human rights) do not fundamentally contradict the ideals and aspirations of any society, and that they reflect our common universal humanity, from which no human being must be excluded...is a universal idea of human rights that can in fact help make the world safe for diversity."

In compensation for its colonial past, Hamelink (1994) argues that cultural relativist arguments are too easily accepted by European intellectuals, which simply serves to strengthen the hand of authoritarian leaders and undermine solidarity with those who would seek to challenge the status quo. Instead Hamelink argues that a minimal standard for universality is needed specifically for victims who cannot speak for themselves, such as *victim–as–litmus–test* articulated by Kofi Annan (1997): "When have you heard a free voice demand an end to freedom? Where have you heard a slave argue for slavery? When have you heard a victim of torture endorse the ways of the torturer? Where have you heard the tolerant cry out for intolerance?".

If we look carefully at what cultural relativists are saying, we can better discern between true cultural differences, which may preclude the implementation of policy based on universal values, and political aspirations at a national or group level. Asian Values' proponents, for instance, usually call to their "*national identities* in accordance with the *ideals and aspirations* of their peoples" (ASEAN 1967: 1, *my emphasis*)[54], as opposed to specific fundamentally different cultural values (Steiner 2005). Opposing voices in support of universal values, such as the former South Korean President and Nobel

[54] The exact wording vis–à–vis universalism is "while human rights are universal in nature, they must be considered in the context of a dynamic and evolving process of international norm–setting, bearing in mind the significance of national and regional particularities and various historical, cultural and religious backgrounds."

Peace Prize recipient Kim Dae–jung (1994: 2) claim:

> "Asia has a rich heritage of democracy–oriented philosophies and traditions…the biggest obstacle is not its cultural heritage but the resistance of authoritarian rulers and their apologists…it is widely accepted that English political philosopher John Locke laid the foundation for modern democracy. But almost two millennia before Locke, Chinese philosopher Meng–tzu preached similar ideas."

According to the Cairo Declaration, "Shari'a law trumps the UDHR" (Littman 1999). Under the more extreme implementations of Shari'a law, Muslim men have twice the power in a court than a woman or a non–Muslim man. However, the Prophet Muhammad himself created the Constitution of Medina (*Sahifat al–Madinah*) "based on tolerance, equality and justice... many centuries before such an idea existed anywhere else in the world" (Sajid 2004: 1). More importantly, despite claims to the contrary (Huntington 1993), recent findings of the World Values survey show that people in Muslim countries support full democratic values as much as those in non–Muslim countries (Inglehart 2003, United Nations Development Programme 2004: 5)[55].

Cultural relativist arguments are used throughout the Muslim world to justify *apostasy*, the denunciation or abandonment of Islam by a Muslim, which would seem to countermand the right to religious freedom, including the right to change religious beliefs, found in Article 18 of the UDHR (United Nations General Assembly 1948). While it is generally agreed that a conversion to Islam has to be voluntary[56], the majority of Muslim scholars agree that, once a person becomes a Muslim, apostasy is cause for execution. They point to the Qur'an (16: 106), "Anyone who, after accepting faith in Allah,

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[55] Democracy could now be called a universal ideal as more than 90 percent of the world's population view it as the ideal form of government (Inglehart 2003, McFaul 2004). However, as he also notes, "Although overt lip service to democracy is almost universal today, it is not necessarily an accurate indicator of how deeply democracy has taken root in a given country. The extent to which a society emphasizes a syndrome of tolerance, trust, political activism, and Postmaterialist values is a much stronger predictor of stable democracy. In addition, subjective well–being and political culture – relatively deep–rooted and enduring orientations as opposed to short–term fluctuations in a society's level of democracy – (are) better predictor(s) of the long term stability of democracy than it is of a society's level of democracy at any given point in time" (p. 51, 54).

[56] Qur'an 10:99: "If it had been thy Lord's Will, they would all have believed — all who are on earth! Wilt Thou then compel mankind, against their will, to Believe!

utters Unbelief… on them is Wrath from Allah, and theirs will be a dreadful Penalty." However, some contemporary scholars use two others verses: "In the Hereafter they will perish" (Qur'an 16: 109) and "Let there be no compulsion in religion" (Qur'an 2: 256) to argue in favor of religious freedom, or at a minimum that apostasy is meant to be punished in the afterlife, not during life (Steiner 2006). Ironically, one prominent Islamic scholar remarks that the interpretation of apostasy as punishable by execution is actually propagated by the West, where "Islam is mistakenly labeled intolerant, and Muslims (are not seen to)…believe in liberty, free will, and choice" (Halim 2003). Halim points to the fact that the Prophet only executed apostates who committed treason or were "linked to an act of political betrayal of the community." In any case, it is a hotly debated issue within Islamic societies, such as Malaysia (Rahman 1998), which has separate court systems to enforce civil and Shari'a law.

Cultural relativism has been used by members of one ethnic group and/or religion to call attention to their own uniqueness and justify discrimination against a particular group of another ethnicity and/or religion. This rhetorical sort of *identity politics* covers up the very real battles over scarce resources such as land, water, or political power (Ruijter 2004) under a mantel of cultural differences, safe in the knowledge that outsiders cannot dispute them without fear of being judged ignorant or insensitive. Yet, according to the United Nations Development Programme's report on *Cultural Liberty* (2004) "wars (are caused by)… economic inequalities,… struggles over political power, land and other economic assets…there is little empirical evidence that cultural differences and clashes over values are in themselves a cause of violent conflict (p. 3)."

In the most extreme examples of identity politics, political leaders emphasize an overriding domination of one identity, e.g., religion or ethnic group, to the near exclusion of all other identities. By focusing on this one identity, former neighbors, colleagues, and friends can de–humanize members of contrasting groups, which can therefore collectively be labeled as evil. By removing the individual human faces from this contrasting group, the members all merge into one homogeneous, anonymous face, which is easier to dislike and distrust. This kind of identity development plays an especially strong role in the first three stages of genocide — classification, symbolization, and dehumanization — identified by Stanton (1998). Nobel Prize winning economist Amartya Sen (2006) outlined how cultural identity–based violence happens and why it is not inevitably socially determined. He

used the example of the brutality between Hindus, Sikhs, and Muslims during the partitioning of British India. In the same vein, the U.S.–based propaganda leading up to the American–led invasion of Iraq in 2003 fed on the cultural identity politics of Samuel Huntington's (1993) *Clash of Civilizations*. The discourses of a "cultural war", a "war of civilizations", and a "defense of democracy" helped to justify a Christian crusade–like march on "Muslim incivility." Iraqis were simultaneously referred to both as terrorists and victims (of a brutal dictator). However, as Reda Benkirane (2002: 2) of the Ecumenical Advocacy Alliance eloquently states:

> "The problem with the application of Huntington's theory in the current context is that cultures and civilizations are now portrayed as playing the roles that nation–states played during the Cold War. Cultures and civilizations are seen as monolithic blocs acting on the geopolitical scene rather than as living and evolving organisms that need constantly to exchange and interact with their environment. Furthermore, the clashes Huntington classified as timeless[57] are more often camouflage for economic and political aspirations by local, regional and international power brokers."

3. False Choice Discourse

If we remember that cultural identities can also include membership in an "institution, organization, field, activity, or society" (Merriam–Webster 2007), then members of groups with different ideas or goals could also claim to have cultural differences between them. These cultural differences could also be vulnerable to the same abuses of misconstruction and misuse. In the United States, differences between socially conservatives and socially liberal groups have been framed as *culture wars* (Hunter 1991: 119). This supposed battle between Progressivism and Orthodoxy or Blue States and Red States has been blamed for the increasing polarization of political debate. As a result, many Americans have settled into two opposing camps, unwilling to listen to opposing points of view. Yet, as Jacoby (2008) notes, the political health of any society rests on rational, evidentiary debate, which does not trivialize alternative viewpoints. This polarization is commonly characterized by a discourse of false choice or *discoursive opposites* (Derrida 1966 (1978)), in which two ideals are framed as being mutually exclusive by na-

[57] Huntington (1993: 25) emphasized that the "conflicts of the future will occur along cultural fault lines separating… seven or eight major civilizations….(Western, Confucian, Japanese, Islamic, Hindu, Slavic–Orthodox, Latin American and possibly African civilization)".

ture and imply that a choice must be made between them.

Universalism and cultural relativism are also often posited as discoursive opposites, and yet they are not mutually exclusive by nature. According to Archbishop Desmond Tutu, if humankind understood all that it shared, we could "delight in our differences" (United Nations Development Programme 2004: v) instead of using them to divide. Even if we argue successfully for salient cultural relativism, differences are not necessarily a true barrier to universal policy. Maleuvre (2004: 134) and Tharoor (1999/2000: 6) argue that respect for cultural difference is predicated upon this kind of universal standard of dignity; respect for universal human rights make it safer to celebrate cultural diversity. The two concepts balance and support each other when not misused. Sen (2006: xvii) sees a respect for both diversity and universal humanism as the key to peace. As the Human Development Report on Cultural Liberty (United Nations Development Programme 2004: 4, 3) concluded:

> "There does not need to be any trade–off between respect for cultural difference and human rights…one way or another every country is a multicultural society today, containing ethnic, religious or linguistic groups that have common bonds to their own heritage, culture, values and way of life….cultural diversity reduces the risk of conflict by making group mobilization more difficult."

If intercultural conflict is a conflict of mythologies (Campbell 1988), then intercultural conflict resolution requires both respect of cultural differences, as well as an agreement to seek areas of common ground (Berghof Research Center for Constructive Conflict Management 2007, Ghetto Radio 2007, LeBaron 2003a, 2003b, 2006, Ropers 2004, Search for Common Ground 2006). Derrida argues that: "discourses of opposites…(exclude)…the richer variety of possibilities in the middle" (Rojas 1997: 26). Fellman (1998) argues this type of false dilemma – or false choice discourse – must be replaced with mutuality discourse, more typical of non–western cultures, to get at these richer possibilities in the middle.

Practitioners of intercultural conflict transformation speak of finding *common ground* (Search for Common Ground 2006) or *transcendent explanations* (LeBaron 2003a: 272) in transforming cultural conflict. "People in conflict are painfully aware of the issues that divide them. They tend to be less

aware of what connects them (LeBaron 2003a: 233)".[58] Anthropologists can continue to study nuances of tribes and cultural diversity can be celebrated, but if too much emphasis is placed on the differences, we risk losing sight of the universality which connects all humankind and risk predestinating outcomes (social determinism) and the stereotyping associated with ethnocentricity.

D. Chapter Summary

This chapter looked at the theoretical foundation of how worldviews are shaped, focusing on the theory, discourse, and interaction between culture and universalism to discover that, while cultural myths diverge widely across geography and time, they all seek to answer the same universal quest for meaning. This meaning is created through the discovery and purposeful engagement in contribution to a larger community. In turn, this community is shaped by vital engagement in the particular geography of the natural world around them. The collective meaning communities construct to make themselves understood to others in their social group are realized through the cultural myths they communicate and pass on to future generations. This conceptual insight of "culture answers to universalism questions" counters the concepts of culture, cultural relativism, and social determinism, which are abused and misconstrued, namely through the industry of cultural difference, identity politics, and false choice discourse.

From an understanding of the interplay between universalism and culture, worldviews and false choices, we turn to the specific western worldview explored herein to see how it uses these concepts to its advantage in framing environmental issues, such as climate change. The first framing task of *global interpretive frame transformation,* Diagnostic Framing, requires us to define the problem and causes of the current dominant frames; this is covered in the next three chapters, which make up Section Two. Chapter Two begins with an exploration of the roots of the culturally–relative western worldview and looks at how concepts of universalism have been misused to wage cultural, economic, and ideological imperialism upon the world.

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[58] Candace Barrett, director of Mythica, a future museum using mythology to highlight: "To mitigate fear of the other…if I'm not afraid of you, I can talk to you…I'm not going to blow you up" (Demko 2006).

Section Two: Diagnostic Framing

Framing Task One: Define the Problem and Causes

TWO

The Western Worldview and the Universalization of a Culture

"One World, One Coke"

In our global-mobile world, any given nation today includes people holding multiple worldviews. However, in every nation, one worldview becomes *institutionalized* over time (Parsons & Smelser 1956: 16, 51). While the values and beliefs of this institutionalized worldview are not held by all of its citizens, it is conformity with this worldview that is rewarded. This institutionalized worldview shapes the way public problems and solutions are envisioned. The western nations of North America, Europe, and Australasia, which have historically contributed disproportionately to anthropogenic climate change (Baumert et al. 2005), share the same institutionalized worldview. While there are clearly a myriad of cultural differences and degrees of environmental responsibility between and within these nations, their common worldview has been shaped by the same three forces: Protestantism, western science, and global capitalism. In this worldview, humankind dominates nature, which is seen as an unlimited resource for humans to exploit its resources for economic growth and personal gain. Nature is humankind's birthright and its garden. Decision–making is highly centralized, and western science and technology allow westerners to control and shape their own environment (Cramer 1998, Devall & Sessions 1985, White 1967). This worldview has been shaped over time by two key influences: Protestantism and western science, which then enabled the dramatic rise of free market global capitalism (Godden 2000). This chapter will look at the historical development of this worldview, some of the core beliefs of this worldview about ownership, personhood, growth, standardization, centralized decision making, justice, and happiness, and the ways in which they have become institutionalized within the global institutions, which hold so much power over social and environmental policy debates.

A. Historical Development of the Western Worldview

Thousands of years after early homo sapiens first migrated out of Africa[59], two broad social groups, which eventually fed into western civilization (Huntington 1993), evolved separately in the forests of Europe and the deserts of the Middle East. The ancient forests of Europe held constantly changing weather, a rich biodiversity of natural plant and animal species, and relative abundance. In contrast, the desert provided scarcer resources within a relatively featureless landscape dominated by the sun. Scholars speculate that these differences in topography and weather led to very different worldviews and societies. The diverse forests of Europe led to polytheistic worship of multiple gods, while the sun–dominated Middle East led to the worship of a single source: the sun (Sapolsky 2005, Textor 1967). This sun god dominance prompted more militaristic (Ember & Ember 1992), nomadic, and paternalistic societies, while the *forest peoples* of ancient Europe evolved into more pacifist, farming, and maternalistic societies (Textor 1967). Over a period of history, the militaristic, nomadic, and paternalistic *desert peoples* eventually migrated north and conquered the more pacifist, farming, and maternalistic *forest peoples* in ancient Europe and began the evolution of western civilization. Sapolsky (2005: 2) argues that: "the desert mind–set, and the cultural baggage it carries, has proven extraordinarily resilient in its export and diffusion throughout the planet, (while) the rain forest mind–set… with their fragile pluralism born of a lush world of plenty…appears not only less likely to spread than its desert counterpart but also less hardy when uprooted." He speculates that spreading desertification (and perhaps the harsher climates wreaked by climate change) may ensure the continued domination of desert societies, even when displaced into forested areas.

Leading primatologist, Frans de Waal (2005), offers a biological explanation for this *desert peoples – forest peoples* dualism in his identification of two distinct sides of human nature. He believes each side has evolved from the two direct genetic ancestors of homo sapiens, the chimpanzee and the bonobo. In short, the former is chiefly responsible for our aggression; the latter for our compassion. De Waal explains the aggressive side largely dominates the West's understanding of human nature while the bonobo side is less known. "The bonobo's female dominance, cooperative nature, and use of sex to restore peace pose a challenge to certain male–biased theories that equate humanity's aggressiveness with progress." Genetic diversity might have

[59] http://anthropology.si.edu/humanorigins/ha/sap.htm

explained differences in worldviews, but genetic and evolutionary biologist, Bjørn Grinde (2008), explains that "relative to the genetically diverse gorilla species, homo sapiens are genetically homogenous." Perhaps the bonobo side has simply been embraced more fully throughout non–western societies.

McFague (1991) explains that: "the power of nature — and of women — to give and withhold life…(formed an)…ancient and deep identification of women with nature...our birth from the bodies of our mothers and our nourishment from the body of the earth." The *desert peoples'* monotheism tended[60] to fear and vilify female–associated symbols, e.g., moon[61], nature, witchcraft, cycles, while forest peoples' polytheism viewed these symbols in a spiritual light. For example, archeologists Knight et al. (1995: 91) found that in societies where women had high political status, menstruation was regarded as *supernatural potency*; in societies where women lacked power, menstruation was viewed as *pollution*. The oft–resulting oppression and condemnation of women within monotheistic societies is justified, therefore, in the name of 'conquering evil.' This type of reasoning begins in the opening lines of the book of Genesis, the starting point for the three primary monotheistic faiths, which evolved out of these militaristic, nomadic, and paternalistic "desert" societies — Islam, Judaism and Christianity — when the first female seduces the first man to betray their god to get them thrown out of the Garden of Eden. Today, these three monotheistic faiths still generally perceive power as originating from a heaven–bound, almighty "patriar-

[60] Classifying religious faiths on absolute terms is always dangerous. Many beliefs which seem to differentiate one from the other become much less distinctive on closer examination. This is largely due to the cross–pollination of ideas across theologies, e.g., Judaism is clearly a monotheistic faith, but the Kabbalah sect embraces pantheism, Hinduism can be labeled both polytheistic and pantheist, which one might argue are mutually exclusive, while one sect, the Dvaita, embraces more monotheistic ideas. Sikhism is monotheistic, but its followers believe in reincarnation.

[61] It is interesting to note that while the word for moon is feminine in Romance languages (from the Latin word *luna*), it is masculine in Germanic languages (from the word *mond).* While some have argued that the masculine form in German is some kind of aberration, Müller (1862: 16) argued that "moon is a very old word. It was móna in Anglo–Saxon, and was used there, not as a feminine, but as a masculine for the moon was originally a masculine, and the sun a feminine, in all Teutonic languages; and it is only through the influence of classical models that in English moon has been changed into a feminine, and sun into a masculine."

chal, hierarchical, (and) militaristic" (McFague 1991) god[62], despite more pacifist, inclusive teachings within their own holy books. Some eco–feminists see the condemnation and fear of nature as uncontrollable as a hidden condemnation and fear of women (Shiva 1992). McFague (1991: 13) notes: "the status of women and of nature have been historically commensurate: as goes one, so goes the other."

1. Protestantism and the Western World

> "we continue today to live, as we have lived for about 1700 years, very largely in a context of Christian axioms." – White (1967: 5)

From 27 February 380, the day Emperor Theodosius I declared Christianity the official religion of the Roman Empire, Christian theology has dominated the western world. As Bainton (1964: 6) states: "the history of Christianity is inseparable from the history of Western culture and of Western society. For almost a score of centuries Christian beliefs, principles, and ideals have colored the thoughts and feelings of Western man."

While declaring the natural world to be a creation by a single, almighty, and omnipresent god, early Christian leaders still maintained much of the mysticism of, and human connection to, the natural world associated with the classic pagan faiths they subjugated. They also largely held with Aristotle's original belief that: "all life forms – plants, animals, and human beings – have nutritive souls, which enable them to find nourishment, to grow and

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[62] Three monotheistic faiths, Sikhism, Bahá'í, and Zoroastrianism, have maintained a healthier balance between the male and female powers, perhaps given their greater legacy of inclusion and environmental care. Unfortunately, or perhaps because of their more inclusive nature, none of the three have been the predominant religion within a modern nation–state, and thus, none carries any significant political influence. The Bahá'í Faith is unique among monotheistic religions in its embrace of the natural world and humankind's symbiotic place in it, as well as the beliefs of all other faiths. Its tolerant and universalist views, in general, are reflected in their progressive stance towards the natural world (Bahá'í International Community 1986). "Human beings…must…show forth the utmost loving–kindness to every living creature...(it is) one and the same, whether ye inflict pain on man or on beast" (Abdu'l–Bahá 1978: 158–159). Although its legacy of male–female balance is weaker than within the Sikh and Bahá'í faiths, its founder, Zoroastrian, taught that humankind, as the seventh creation, must protect the other six creations of sky, water, earth, plant, animal, and fire. Followers subscribe to a cosmic order similar to Taoism in which "all the creations on the earth are interconnected to each other and need each other for survival. Neglect of the environment is considered a capitulation to the forces of darkness and evil" (Tomek 2006).

to reproduce. Animals and humans have sensitive souls, which enable them to sense events in the environment. Only humans, however, have rational souls, which enable them to reason" (Schlinger 2005: 2–3). According to White (1967: 1206): "in the early Church, nature was conceived primarily as a symbolic system through which God speaks to men: the (hard–working) ant is a sermon to sluggards; rising flames are the symbol of the soul's aspiration. The view of nature was essentially artistic rather than scientific."

In the 11th century, Christendom split into two factions: the Eastern Greek tradition – Eastern Orthodox Church – and Western Latin tradition – the Roman Catholic Church. Even while the Eastern Orthodoxies continued the natural theology tradition of seeking evidence of God within nature, "by the early 13th century, (Latin Christian) theology…(had moved away from) decoding… physical symbols of God's communication with man…(to) understand(ing) God's mind by discovering how his creation operates" (White 1967: 1206). Nearly 500 years later, the Reformation split Western Christianity further into two primary factions – the traditional Roman Catholics, led by the Pope, and the Protestants, e.g., Luther (1517 (1915)) and Calvin (1518 (2008)), who believed in a more direct spiritual relationship with their god. Centuries of bloody warfare between Protestants and Catholics in the name of faith followed this split[63].

2. Modern Science and the Western World

> Science: from the Latin *scire*, "to know"…"to separate one thing from another"

Prior to the Scientific Revolution of the mid 16th century, religious leaders held the keys to humankind's understanding of the spiritual (and by extension) natural world. However, western scientists absorbed the knowledge of the earlier Islamic scientists (White 1967: 1204) and began to decode some of nature's secrets and disprove some core historical beliefs, e.g., Galileo's discovery that Earth revolved around the sun. Even though these scientists argued that their discoveries did not contradict the Christian Bible, some were condemned by religious leaders as heretics. In fact, the Catholic Church only officially admitted in 1992 that Galileo had been right (New Scientist 1992).

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[63] One could argue that this Catholic–Protestant warfare only truly ended with the Good Friday Agreement in Northern Ireland in 1998, nearly 500 years later.

One of the key scholars of the subsequent Age of Enlightenment, Rene Descartes (1637 (2008)), was widely credited with providing the philosophical framework for the natural sciences. His work on the mind–body dichotomy, or dualism, in particular, fundamentally changed the way western people saw themselves vis–à–vis the rest of the natural world. Descartes believed humankind possessed both a material body as well as a non–material mind. Each could influence the other. However, feeling, reasoning, and spirituality were solely in the domain of humankind; non–human living entities possess only physical bodies devoid of souls, emotions, or sensations[64]. All physical functions of the natural world could be explained and understood through physical laws, not through divine or natural phenomena. The result of his work is known as the Cartesian split – the view that humankind is separate from, and superior to (instead of a part of), the natural world. In the early 17th century, Francis Bacon set out to eradicate all mysticism from scientific research. He founded the modern empirical tradition, which held that all natural processes could be studied through observation but only by a mind, which had been 'freed' of the distorting influence of its prejudices and opinion, e.g., its *idols*. This was a direct repudiation of the Aristotelian belief that knowledge could be gained through the logical reasoning and prior experiences valued in his metaphysical theory (Klein 2009). As westerners embraced western science and disavowed the mysticism in the natural world, they came to see all natural processes as knowable, and, later, controllable (White 1967)[65].

While Christian leaders rejected the notion of the Cartesian split in that it separated man from God, the rising Protestant movement did embrace the idea that this split 'liberated' human souls from the laws of nature, as it reinforced humankind's superiority to nature, while denying a mediating role to the politically–powerful Pope and Catholic Church (Calvin 1518 (2008), Campbell 2006, Luther 1517 (1915)). The natural world was seen as a gift from God over which humankind acts as benevolent rulers. Although, as Berry (1993: 96–97) points out: "in biblical terms, the 'landowner' is the guest and steward of God: 'the land is mine; for ye are strangers and sojourners with me' (Bible, Leviticus 25: 23, NIW 2010)." In the late 17th cen-

[64] Hume (1739 (2003: 94) later disputed this when he argued that our reasoning was the same as the "wonderful and unintelligible instinct" possessed by all animals which "arises from past observation and experience".

[65] Bacon is often accused of proposing to 'torture nature's secrets out of her', yet many Baconian scholars dispute this claim, saying he has been falsely accused (De Madariaga Mathews 1996, Pesic 1999).

tury, Enlightenment philosopher, John Locke (1689 (2004: 13)) used Genesis to establish a theological justification for humankind's ownership and exploitation of the natural world:

> "God gave the world to men in common; but since he gave it (to) them for their benefit, and the greatest conveniences of life they were capable to draw from it, it cannot be supposed he meant it should always remain common and uncultivated."

These ideas of separateness, superiority, and rationalism from western science and Protestantism enabled both the exploitation of natural *resources* (White 1967) and the *Christianization* of European colonies. After 'discovering' and colonizing the rich natural and cultural bounties of 'their' colonies, these heaven–bound, nature–conquering nations convinced the traditionally nature–worshipping indigenous[66] peoples of these areas to 'sell' their ancient lands for a pittance (Shorto 2005). Many cultural artifacts were 'appropriated' during this colonial rule (World Commission on Protected Areas 2000) and still fill western museums.

The religious wars in Europe spilled over into the Americas, Africa, and Australasia, where both Catholic and Protestant nations were colonizing. The defeat of the (pope–backed, Catholic) Spanish Armada in 1588 by the (Protestant–led) British, as well as the defeat of Spanish ships in 1639 by the (Protestant–led Dutch) had worldwide political consequences, as the military and economic strength of the Protestant–led nations of Britain and the Netherlands increased throughout the colonies, particularly in what would later become the power center of the United States (Shorto 2005).

Christianity remains the most predominant faith within the western

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[66] Defined as those "which, having a historical continuity with pre–invasion and pre–colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them. They form at present non–dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system" working definition offered by Jose R. Martinez Cobo, the Special Rapporteur of the Sub–Commission on Prevention of Discrimination and Protection of Minorities, in absence of a UN consensus definition (United Nations Secretariat Of The Permanent Forum On Indigenous Issues 2004). Even though the United Nations General Assembly (2008) eventually adopted the Declaration on Rights of Indigenous Peoples, they still cannot agree on a definition.

world[67], which accounts for over 60 percent of global domestic product (GDP) (International Monetary Fund 2009)[68]. In the world's largest economy, 74 percent of Americans self–identify as Christians (Kosmin & Keysar 2009). Despite official secularization of many modern governments[69], "more than 80 percent of the world's people identify with a religious faith and look to religious leaders for guidance" (Cavoukian & Olfman 2006). The predominance of Christianity in the western world, particularly in the United States (Uhlmann et al. 2011), gives religious leaders – particularly Christian leaders in dominant western economies – moral sway over policy issues when they choose to engage[70]. Although the schism between Protestantism and Catholicism is not nearly as salient today in western nations as it was in the years immediately following the Reformation, Protestant political leaders still dominate the United States today.

This Protestantism sees humankind as an individual with a direct relationship to an almighty god, where virtue was found not in community, good works, and compassion but in a single–minded literal reading of the Christian Bible, to secure a place in heaven. Earthly problems are of less importance than pure belief and faith in God. One Christian Nation blogger illustrates this kind of prioritization well: "why would you be more concerned

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[67] While the nation states of the western world are officially secular today, a "common Christian heritage" is still invoked in modern times in popular and policy discourse, especially to defend against the growing influence of Muslim minorities or those who would enforce secular traditions. This includes those who repeatedly refer to western nations as "Christian nations".

[68] Of the remaining 40 percent of global GDP, nearly 20 percent comes from two advanced industrial Asian economies – Japan and South Korea – and two rapidly industrializing Asian economies – China and India. The remaining 147 nations of the world – more than five and a half billion people (United Nations Population Division/DESA 2009) – share the remaining 20 percent of global GDP (International Monetary Fund 2009).

[69] Although surprisingly, many of the most modern western societies, such France, Norway, and England, do not have a constitutional separation of church of state.

[70] Although a minority religion in the western world, leaders of Jewish descent in many western nations hold a significant number of positions of leadership in academia and non–profit organizations. Judaic views, therefore, are salient as the idea of religious stewardship is strong among Jewish leaders. According to Judaism, humankind does not actually own anything. They only have "possession rights in various degrees of complexity" in order to return it in a healthy state to God and future generations. Jewish theologians point to this as evidence that God intended humankind to be stewards of Earth. They see environmental stewardship as a reflection of the traditional Jewish values of *Tikkun olam* (repairing the world), *tzedek* (justice), *g'milut hasadim* (performing deeds of loving kindness), and *shalom* (peace) to protect both people and other species from environmental degradation (Coalition on the Environment and Jewish Life 2015).

about poverty than homosexuality? Poverty wont send anybody to Hell while homosexuality will. I think you (another blogger who volunteers with AIDS patients) have your priorities screwed up (Bunnett 2009)." An individual owes nothing to the community outside of his own pursuit of wealth and personal fulfillment as each person is responsible for achieving their own potential.

3. Capitalism and the Western World

Mercantilism gave way to early capitalism under the pressure of the industrial revolution of the late 18th century. Since the dawn of this industrialization, western nations have dominated commerce and politics around the globe. In the mid 19th century, the Baconian creed merged the western scientific belief that nature could be understood with a technical approach to the natural environment to the point where westerners believed their technologies could control nature (White 1967: 1203). In the 20th century, capitalism was seen to have "defeated" fascism (following World War II) and communism (following the collapse of the Soviet Union) as alternative ideologies. As the "ideological victor," capitalism became embedded in the dominant western worldview.

Although the United States won independence from direct control by the Netherlands or England centuries ago, the Protestant–Cartesian worldview of humankind's superiority over, separation from, and objectification of the natural world it inherited from its colonizers drove the developing and institutionalized American worldview (Devall and Sessions 1985). In the second half of the 20th century, the United States used its superpower status and notions of its own exceptionalism (discussed in more depth later in this chapter) to intensify the global spread of a worldview dominated by western beliefs in ownership, personhood, growth, standardization, centralized decision making, justice, and happiness. Although I am not necessarily arguing historical causation – that the United States became a superpower because of this worldview – it has been noted that "Protestant values better facilitated the progressive force of capitalism" (American Environics 2006: 23), an economic system which has dominated global commerce for the last sixty years.

Capitalist ideology takes more than one form, but since the administrations of the British Thatcher and American Reagan in the 1970s and 1980s, the laissez–faire form of capitalism – *market fundamentalism* (Soros 1998) has dominated this global commerce. This Anglo–American model (Burns &

Thomas 2009) of *market fundamentalism* is guided by three basic notions:

I. *privatization*, which holds that "government is wasteful and ineffective, and so cannot produce quality (services), thus, (these services) should be privatized whenever possible" (Brewer & Lakoff 2008: 9). "All social activities and human interactions should be looked at as transactional, contract–based relationships and valued in terms of a single common denominator, money" (Soros 1998: xxvi).

II. *deregulation*, whereby the market is a rational, self–regulating, and self–correcting economic system, which encourages a social Darwinism in which only the strongest (and sometimes harshest) organizations survive. Governmental regulation is a barrier, which only disturbs the perfect workings of the market.

III. *market specialization*, in which the entire globe is seen as one big market and resource. Individual nations, regions, and states are encouraged to eliminate *trade barriers*, which protect the national or regional markets, and specialize in a few commodities, which can then be sold into the global market. Wallerstein (1974) used a world–systems approach to show how capitalism moves raw materials from the developing world (the periphery) toward the industrialized developed world (the core).

B. Core Ideas of the Dominant Western Worldview

The historical development of the dominant western worldview, outlined in the previous section, fed the core tenets of the *Dominant Worldview* mentioned in the Introduction (Devall and Sessions 1985: 69), which proposed separation from, superiority over and exploitation of nature. The following section outlines seven of these beliefs and contrasts them with an alternative worldview.

1. Western Ideas of Ownership

As part of the Lockean interpretation of the Christian Bible, not only may humankind – at least westerners – own and exploit natural resources, it is their destiny. The American conviction of 'manifest destiny', which justified the expansion of its borders from the East Coast to the West Coast, confiscation of land and resources, and the subjugation of the indigenous peoples already living on that land (Greenberg 2005), was one of the most extreme expressions of this belief. This belief continues to shape how American chil-

dren are taught American history, as well as public policy today (Stephanson 1995).

In contrast, the *deep ecology* worldview, and its ancient and enduring expression within normative indigenous societies, sees humankind as an inextricable part of nature. Humankind is seen as a part of a mysterious and incomprehensible natural world, which holds humanity at its mercy. Natural resources are to be used only in a way that ensures abundance for future generations. Indigenous peoples do not take ownership of the lands they fish and hunt (Smith 1995), but considers the long term impact in its current decision making[71]. "Nature is not only a productive source, but the center of the universe, the core of culture and the origin of ethnic identity" (Toledo 2001: 336). Lovelock (1979) called this classic mythological view of Earth as a living, feminine, mystical, and interrelated system – Gaia. Jung (1936 (1969)) explained that "the archetypal mother was a part of the collective unconscious of all humans…and precedes the image of the paternal father," which could explain the endearing reference to Gaia as *Mother Earth*.

Yet, it is the institutionalized western worldview of nature, which greatly favors the West – in the form of its corporations – over the rights of indigenous peoples, which is imbedded in trade treaties and organizations, such as NAFTA and the World Trade Organization (Hamelink 2006a, Stevenson 2000, Tauli–Corpuz 2006). The Economist (1986) illustrated this bias when it argued: "Africa's (otherwise communal) land, "must be enclosed, and traditional rights of use, access and grazing extinguished;…it is private ownership of land that has made capitalism work". Pro–market national leaders of developing nations, such as Peruvian Alan Garcia, have used free trade agreements like the *United States – Peru Trade Promotion Agreement* to circumvent the non–binding United Nations General Assembly (2008) Declaration on the Rights of Indigenous Peoples, which requires *informed consent* of indigenous communities for any kind of private commercial activities in their territories. This had precedent in the implementation of the North American Free Trade Agreement (NAFTA) in indigenous areas of Mexico. The constitution, which resulted from the Mexican Revolution in 1917, included Article 27, which was to eliminate the massive inequity in land ownership. Before the revolution, "ninety–six per cent of…rural families in Mexico owned no real property…and ten million indigenous people (from)… villages, which had owned from time immemorial communal lands known

[71] The golden rule of the Native American Iroquois Confederacy.

as *ejidos*, had not only been dispossessed of their communal holdings but were in a state of revolting from medieval serfdom" (Hackett 1926: 339). Article 27 returned the *ejidos* to the villagers and enforced their rights until 1994. As part of NAFTA, however, Mexico eliminated Article 27, which allowed the formerly communal land to be sold to private enterprise. This – coupled with the elimination of subsidies to small farmers – resulted in a dramatic shift from family farms to agro–business. Approximately 1.5 million Mexicans farmers were forced off their land at the same time when "the price paid to farmers for their produce dropped by 70 percent, but the price of the nation's staple food, corn tortillas, increased (more than) 50 percent" in rural Mexico (Walker 2005). Vázquez Castillo (2004) traces this major shift in land policy to both the elimination of Article 27 under NAFTA and the austerity program demanded by the World Bank, IMF, and private international banks.

Global agribusinesses (Schlosser 2001) continue to engage in "large–scale, industrialized, vertically integrated food production" (Kingsolver 2003) – often turning more indigenous and collective societies into laborers of multinational corporations instead of communal workers of their own land (Kleinhaus & Schenwar 2008). Besides the private appropriation of land, pharmaceutical conglomerates are copyrighting and patenting native plants and medicines, which have been collectively used by indigenous peoples for centuries at an astounding rate by western corporations (LaDuke 2007). By the late 20th century, 25 percent of all patented pharmaceuticals contained indigenous knowledge (Peterson 1992), and ninety–seven percent of all patents were held by global pharmaceutical companies (Howard 2001). The World Bank (2003: 10) justified the lack of copyright protection for collectively–held, indigenous knowledge, which has a western commercial value, by arguing the following:

> "Copyright laws normally vest in an individual, for works that are original, and fixed in a medium of expression from which they can be perceived, reproduced, or otherwise communicated. IK (Indigenous Knowledge) is almost never held individually, being passed down orally from generation to generation, and held collectively by the group."

Open questions on rights vis–à–vis indigenous knowledge are referred by western companies and public officials to the World Intellectual Property Organization, a United Nations' body, which exists solely to promote "the

protection of intellectual property (IP) throughout the world" (1979). While professing to be concerned with indigenous rights, the WIPO commonly uses the discourse of the western private sector, e.g., emphases on shareholder value, efficiency, commercialization, and value for money (Carson 2008, World Intellectual Property Organization 2007a, 2007b). They focus on protecting the IP rights of western corporations from unauthorized use by the public and private sectors in the rest of the world. Funding for the WIPO comes from the revenue they earn registering new properties. Since three–quarters of all applications to the WIPO come from the United States, Germany, and Japan (nearly ten percent of these are for pharmaceuticals) (Filipov 2008), and the WIPO staff is comprised of technical, legal, and economic experts (World Intellectual Property Organization 2007c), it is easy to imagine that western ideals of ownership take priority over more collective ideas of indigenous societies.

Indigenous peoples have tried to find creative ways to marry their views of the natural world with the western emphasis on ownership:

> "Bangladesh recognizes community–based rights to biological resources and associated traditional knowledge. Lao PDR documents knowledge in its Traditional Medicines Resource Centre. South Africa has promised to share with the San Bushmen the proceeds from drugs developed based on their knowledge. Countries have already found ways of using existing intellectual property rights systems to protect traditional knowledge. Industrial designs are used to protect carpets and headdresses in Kazakhstan. Geographical indications protect liquors and teas in Venezuela and Viet Nam. Copyrights and trademarks are used for traditional art in Australia and Canada" (United Nations Development Programme 2004: 11).

Yet, intellectual property agreements force indigenous people to argue for their own rights to elements of the natural world within a western framework. Since indigenous peoples do not see the natural world as own–able in the first place, it is difficult for them to argue for possession.

2. Western Ideas of Rights

A broad interpretation of the fourteenth amendment to the U.S. Constitution some 150 years ago granted private multinational companies *corporate rights* (Hardin 1975), equal protection under the law as quasi–individuals

(NOW 2005). This right was reinforced again when the U.S. Supreme Court "recognized that the First Amendment applies to corporations" in its recent revocation of bans on corporate financing of political campaigns (Citizens United v. Federal Election Commission). Legal scholars have argued that because of these Supreme Court decisions, the "First Amendment constraints…government regulation of commercial speech" (Lytton 2010: 1). This echoes the second notion of Anglo–American *market fundamentalism* (Burns & Thomas 2009): deregulation, in which the public sector is seen as an inefficient barrier to the self-regulating workings of the private sector. Two illustrative examples of this *barrier* framing come from health claims made by food producers. From 2007 – 2009, the most popular cereal in the world, Cheerios, advertised that its product could "lower your cholesterol 4 percent in 6 weeks," a claim which helped increase product sales by 13 percent in one quarter (Larkin & Stanford 2009). When the U.S. Food and Drug Administration (FDA) demanded that its producer remove these claims because they had no scientific basis, conservative bloggers considered the move a "progressive' (i.e., authoritarian) absurdity" (Theroux 2009). Even progressive bloggers, who decried the conservative reaction as crazy, began the article with the claim that: "Disputes over food–label claims are always political." (Mitchell 2009). Secondly, in 2010, when the FDA cracked down on false health claims of POM Wonderful for claiming pomegranate juice could treat heart disease, prostate cancer, and erectile dysfunction (Huffstutter & Zajac 2010), POM sued the FDA "on grounds that the First Amendment protects commercial speech" (Nestle 2011). In essence, lying to consumers was a right of corporations protected by the Constitution.

Relying in part on the precedent of *corporate rights* (Hardin 1975), Stone argued in a 1972 law review article that, because rights had evolved over time to include more and more entities which were previously thought unfit and had no representation, such as "children, slaves, women, racial minorities, aliens, fetuses, and endangered species" (Perkins 2003), the "courts should grant legal standing to guardians to represent the rights of nature, in much the same way as guardians are appointed to represent the rights of infants" (Cullinan 2008: 2). The U.S. Supreme Court accepted this argument for natural entities as *jural persons* and allowed an environmental group to sue a ski resort developer in the name of protecting a valley, for which it otherwise had no other legal or financial interest (Sierra Club v. Morton 1972). Natural rights recognized that "nature was not just a conglomeration of objects that could be owned, but was a subject that itself had legal rights and the standing to be represented in the courts to enforce those

rights" (Cullinan 2008: 2). One poll (Leiserowitz et al. 2005: 28) showed that nearly all Americans agreed or strongly agreed with the statement: "Nature has value within itself regardless of any value humans place on it.[72]"

Yet, despite this 40 year precedent of the jural rights of natural entities, the current, more conservative U.S. Supreme Court, may have begun to reverse it when the majority opinion recently dismissed the idea that whales could be represented by an environmental non-profit organization (United States Supreme Court, Winter, Secretary Of The Navy, et al., Petitioners v. Natural Resources Defense Council, Inc. 2008). One of the concurring justices stated: "even if (the) sonar does cause a limited number of injuries to individual marine mammals, the Navy asserts that plaintiffs have failed to offer evidence of species–level harm that would adversely affect their scientific, recreational, and ecological interests…for the plaintiffs, the most serious possible injury would be harm to an unknown number of the marine animals that they study and observe (p. 21)." There was no weight given to the whales themselves, only to the material damage the researchers may incur by not being able to study them. Even the minority dissenting opinions mention nothing about the rights of the whales themselves as jural persons.

The Federal Ethics Committee on Non–Human Biotechnology (FECNHB) in Switzerland's study on humankind's moral responsibility to plants was based on three rationales (2008, *paraphrased*):

I. *Instrumental Value* to humankind in the form of food, biodiversity, etc,
II. *Relational Value* because they are considered worthy of protection for emotional or aesthetic reasons,
III. *Inherent Value*, independent of usefulness, or ascribed value.

The first two rationales imply humanity may provide a litmus test for the worthiness of plants and, by extension, the natural world. The last rationale

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[72] The animated film *Bee Movie*, released in 2007, supports Gerringer's (2006) conviction that mass media "mirror(s) the culture–at–large." The film explored the interconnectivity and unnoticed value of the natural world to humanity, borrowing ideas of natural rights in which any creature has civil rights which can be fought for in a human court of law. In this case, the bees win a lawsuit, which allows them to reclaim all of the honey 'stolen from them' and then retire. As a result, the bees do not pollinate and the flowers and trees begin to die. Since this film was made in Hollywood, the bees realize this just in time, find the last flowers on Earth, and the flowers and trees bloom again.

implies plants have inherent "dignity" and, therefore, the right not to be injured. Some participants argued: "plants are not part of the moral community because they do not satisfy the conditions for belonging to this community" and expressed a concern that moral conferment would lead to a "morally over–regulated" life for humankind. However, there was a broad agreement that "we should not harm or destroy plants arbitrarily." The underlying question in this discussion, of course, was whether humankind had the right to determine the value of other living organisms. If the answer was yes, then the questions become "Upon what argumentation is that right bestowed?" and "Under what circumstance may humankind claim that value"?

Albert Schweitzer (1936) answered the first question with a resounding "no" when he argued that revering all life forms was a *universal ethic*, not some culturally–relative idea. His views borrowed from Hume's (1739 (2003)) belief that sympathy extended beyond humankind to all living organisms, as well as Kant's (1785 (1949)) claim of a universal ethic. Schweitzer (1936) further argued that this universal ethic had spiritual implications because, "our recogni(tion of) the solidarity of life…teaches us sympathy with all life (p. 239)." The FECNHB attempted to answer the first question by first distinguishing between three types of *moral objects* — the plant collective or bio–community (e.g., a forest, meadow, or coral reef), the plant species, and an individual organism. While there was a diversity of opinion amongst the committee on the rights of the latter two, they unanimously concluded that there was value in the interactions of biodiversity because of the complexity of the relationship between plants. To consider the moral bases for the rights of individual plants, the committee postulated that "all organisms (could) count…

I. … because of their relationship to God, the creator (Theocentrism)
II. …depending on their (potential) capacity for reason and abstract speech (Ratiocentrism)
III. …if they are able to experience something, in some way, as good or bad (Pathocentrism)
IV. …simply because they are alive (Biocentrism)" (2008: 12, *paraphrased*).

From the finding of cellular biologists that plants and animals are fundamentally the same at a cellular level, a clear majority of the committee argued the *biocentrist* position because they could be harmed. Given these ar-

guments, however, the study concluded that, as long as humankind did not arbitrarily harm plants, "any action with or towards plants that serves the self–preservation of humans to be morally justified (p. 20)." However, the committee stated categorically that plants — individually as a species or as a community — cannot be owned.

3. Western Ideas of Growth

McKibben's (2007) work on *deep economy*[73] shows how economic growth is a relatively modern idea. Yet, it is a commonly held and unquestioned belief in the western private sector that an organization must grow to survive, what McKibben calls the *growth consensus*. Daly (1991: 185) claims the *growthmania* in the U.S. has blinded even the economists for decades. This was less of a problem in the past when companies were more often local, privately–held, family run operations. But, in the modern reality of widely–held, publicly traded global conglomerates, there is little room for a solid business who earns the same year after year from a stable and happy group of customers, but does not grow (Brunzell et al. 2009, Liljeblom & Vaihekoski 2009)[74].

The increase of short trade speculation, trading on stocks held less than a year, and the relatively low costs to do so[75] (Weidner 2009) have meant that publicly–traded companies come under increasing pressure from stockholders to drive up the stock price. To do so, corporate managers are forced to focus on increasing short–term earnings; hence, the attraction of growth (Graham et al. 2006). This growth often relies on marketing, particularly to consumers, to artificially create demand, which is greater than the actual need[76]. Giroux (2000) outlined nearly a decade ago how western corporations target children as consumers, particularly because of their vulnerability to manipulation. Barnes (2009) provides one quintessential, but not un-

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[73] McKibben's advocacy of *deep economies* argue that massive 'growth' has made Americans unhappy and destroyed the environment. He argues that by pursuing local economies "with regions producing more of their own food, generating more of their own energy, and even creating more of their own culture and entertainment," we will solve our environmental and social problems, while making ourselves happier.

[74] The steady state economy movement is trying to change this http://steadystate.org/.

[75] This is true even though profits from short term trade speculation is taxed at a higher rate in the U.S. (as income instead of at the lower capital gains tax).

[76] This was my own conclusion after nearly 20 years of applying my own academic studies in communication and psychology to marketing efforts in the private sector and listening to innumerable presentations on the function and "successes" of marketing.

common, example of this targeting[77].

Unfortunately, this focus on short term growth often comes at the expense of long term health of the company, employees, customers, and the environment. Constraints on speculation, which reward company health instead of growth, in the form of higher taxes on short term trading profits or per transaction fees for trading, could help reverse this short term thinking. In addition, limiting advertising, which promotes consumption, fosters insecurity, and hinders self–acceptance, one predictor of lasting well–being" Velasquez–Manoff (2008), and restricting predatory marketing activities (Morris & Boone 1998), especially to vulnerable groups, e.g., lower income, children, schools, could have a larger ripple effect.

Ideals of growth are related to concepts of time. In the western world, time is seen as monochronic: a linear progression (from the root word "progress") of history – with a past, present, and future. Europeans living in the Middle Ages idealized the past – the Eden – to which it must return. Yet, the increasing confidence in individual reasoning sparked by the Enlightenment and the socio–cultural evolution theories popular at the time shifted this focus towards a future ideal[78] (Comte 1844 (1865), Smith 1776 (1835), Spencer 1873). Sachs (1999) argues today that the western monochronic fixation on speed and efficiency is the root of our environmental problems: "The ecological crisis can be read as a clash of different time scales; the time scale of modernity collides with the time scales which govern life and the earth (p. 189)." This is in sharp contrast to the longer–term, more holistic approach of the indigenous worldview, which sees time as polychronic: where past, present, and future cannot be separated in decision making (Hall 1979). Decision making considers not only how the decision would be seen by their ancestors, but all social and environmental costs over seven generations of descendants (See Sápmi case study in Chapter Five for an example).

4. Western Ideas of Standardization

Economic growth has been successfully sold as a panacea for a host of public sector issues, such as poverty reduction, female empowerment, and

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[77] The admiring tone of the article is disturbing.

[78] Smith (1776 (1835)) first proposed that all societies pass through four linear stages of development: hunting and gathering, pastoralism and nomadism, agricultural, and commerce. The discipline of sociology grew out of this study of social progress.

greater freedom of movement (Bhagwati 2004, Sachs 2005). As a result, developing nations have been driven toward economic growth and market openness, as measured in gross domestic product (GDP), instead of human markers of true representative government, social welfare, and peace. The International Bank for Reconstruction and Development/World Bank (2005: 68) "uses consumption data for deciding who is poor." This discounts the more indigenous forms of barter trading, which are difficult to quantify, in addressing poverty alleviation. Indigenous bartering societies are automatically classified as poor and in need of western economic development, along with the truly impoverished living in urban slums and war–torn areas.

Underlying all of these ideas is the notion that systems can and should be controlled and judged on the same standards. The Universal Declaration of Human Rights and the subsequent International Criminal Court established in 2002 could be seen as positive expressions of this belief. Yet, too often, the standards – such as the one for poverty – is set to a western standard. Global trade agreements have been used to trump popular regional and national policies. One recent example, ironically amongst western nations, was the approval of genetically–modified seeds in Western Europe, despite strong popular resistance and valid questions of food safety (Gonzalez 2006–2007). Arguments in favor largely echo the belief in standardization of products – whether they be grown, raised or made. Schlosser (2001) outlines how this "McDonaldization" of work, education, farming, and food preparation has led to a distrust in natural systems. This mistrust shows through when schools ban homemade baked goods at school bake sales in favor of store–bought because officials could not monitor the ingredients (Susman 2010). In essence, trust of the corporation, which created a thoroughly processed product, is higher than trust in the next door neighbor.

5. Western Ideas of Centralized Decision Making

Standardization relies in turn on a centralized, hierarchical, and bureaucratic type of authority, which can judge conformity – or not – to the established forms of standardized measurement, and technocratic-industrial societies. The notion of this kind of centralized decision making runs throughout the international organizations outlined above, which have been deemed "responsible" for solving the world's social and environmental problems by the western nations which largely control and fund them. This is in contrast to the more decentralized – or local – and democratic model of decision making favored by the deep ecology bio-regional worldview. Although this

viewpoint is often associated with indigenous groups and near-anarchic protest groups, Devall and Sessions point out (1985: 18-19) that this alternative has strong precedent among the *minority tradition* in the United States. While the U.S. Republican Party claims small centralized government and deregulation as its core tenets, its minority tradition is most truly found among the Libertarian Party. While the Democratic Party claims inclusion and community participation as its core tenets, its minority tradition is most truly found in the bio-regional movement. In essence, the minority tradition shows that the political spectrum is not a linear contrast between extremes, but as a circle in which the 'radical' elements of each 'side' unite along the beliefs in regional, self-sufficient communities. This is reflective of Rojas (1997: 47) Circular Configuration of Discourses of the Environment (Appendix C). As Devall and Sessions note (1985), the minority tradition: "does not mean a lack of authority, but a lack of centralized authority relying on large forces of police or military to keep power over restless local communities (p. 19)."

6. Western Ideas of Justice

Unlike the western tendency to judge conformity to standards as a hard line between right and wrong and assign penalties to non-conformists, restorative justice sees "wrongdoing…as a symptom of a breakdown in relationships within the wider community and the elders seek to restore the damaged relationship rather than focusing on identifying and punishing the wrongdoer" (Cullinan 2008). Restorative justice and holistic policy making require the rejection of false choice and the seeking of common ground (Berghof Research Center for Constructive Conflict Management 2007, Ghetto Radio 2007, LeBaron 2003a, 2003b, 2006, Ropers 2004, Search for Common Ground 2007), which were discussed in Chapter One.

In contrast to the high level of force used to maintain control within the dominant western worldview, indigenous ideas of deliberation and communal rights focus on deliberative democracy and restorative justice. While democracy itself is prized as a western idea, it may have been inspired in part from the deliberative democracy of the Six Nations' Iroquois Confederacy, who are native to North America (PBS 2000). While "inclusive approaches to policy–making take more time than traditional (hierarchical) methods" (Bullock et al. 2001: 8, *paraphrased*), citizen participation is seen as crucial for a representative and trusted system (Organization for Economic Cooperation and Development 2001). Even traditional systems in which policy making traditionally occurred behind closed doors among an in-

formed elite need to change in order to "satisfy a sophisticated 21st century society…(modern policy making must be a) "holistic, long–term, open and evidence–based process which employs a strong ethical and legal base, while accounting for multiple influencers, risks, and experiences" (Bullock et al. 2001: 12, 14, *paraphrased*).

7. Western Ideas of Happiness

Finally, the institutionalized worldview in the United States has developed a very specific, materially–based idea of happiness. This right to the *pursuit of happiness* is enshrined in the Declaration of Independence as one of three inalienable rights of humankind, equal to the rights to *life* and l*iberty*. In contrast, other democracies place more emphasis on community over individual gain with the inclusions of security (UDHR), fraternity (France), and peace (Canada). Throughout the history of the U.S., this right to the *pursuit of happiness* has been interpreted as a right to property, a right to obtain material possessions, and a right to privacy.

Even given the distinctively individual nature of the U.S. triad, it would not be an unreasonable assumption to believe that wholesale destruction of the natural environment and virtual colonization of global economies in pursuit of this economic gain would seem a corruption of the original intent of the founding fathers. Yet, the starting point for U.S. negotiators at the Rio Earth Summit in 1992 was "the United States' standard of living is not up for negotiation" (Hertsgaard 1992b: 13). Based on this, they promptly deleted "virtually all references to northern consumption patterns" (Hertsgaard 1992a) from the conference publications.

Furthermore, through the media dominance of western corporations (Croteau & Hoynes 2003, van Ginneken 1998), this western notion of the "pursuit of happiness" – through individualism and the material possession of consumer goods – is projected to the world as some kind of universal ideal (Klein 2002, Naipaul 1990, Ramonet 2002). The dominant messages about happiness (Kasser & Ryan 1996) go something like, 'you will be happier if only you are thinner, richer, better looking, drive this car, wear these clothes, etc.' In the words of one of the world's top brand management firms:

> "brands are…central to…democratic societies. They…have a profound impact on…the way we see our world…(They) symbolize a promise that people believe can be delivered and one they desire

to be part of. Through emotion, brands can achieve the loyalty of consumers by tapping into human values and aspirations that cut across cultural differences"(Interbrand 2005: 4).

Interbrand describes *glo–cal marketing* as "communicat(ing) in many languages but with one voice" (*ibid*). For instance, Coca–Cola supposedly communicates happiness, Louis Vuitton luxury, Nike athleticism, and Harley–Davidson freedom. For decades Coke's *glo–cal* marketing strategy has helped make it the most financially valuable brand in the world, valued in 2010 at more than US$70 billion (Interbrand 2010).

8. Western Exceptionalism

Underlying this universalist ideal is the western exceptionalism, which has marked globalization since early colonialism. It continues today in its most extreme form under American exceptionalism, the belief that: "the United States differs qualitatively from other developed nations because of its unique origins, national credo, historical evolution, and distinctive political and religious institutions" (Koh 2005: 225). While American exceptionalism has been criticized on multiple fronts, it is embedded in the national mythology of the United States (DuVal 2009) and has characterized many aspects of its relationship to non–western nations (Lepgold & McKeown 1995). Because the U.S. believes "its values and institutions are the best yet devised,…the world needs to adapt itself to American ways rather than vice versa" (Malone & Foong–Khong 2003: 14)[79]. One of the long–term effects of American exceptionalism has been what Granitsas (2005) calls a collective tuning out of the world[80].

Although the West has originated most of the environmental destruction, weapons production, warfare, enslavement, and colonization of the non–western world, it also sees itself as the champion of universal human rights, democracy, and progress. While the West's contribution to the latter should not be minimized, its complicity in the former has compromised its reputation, regardless of its intentions. As Huntington (1998: 51) has pointed out: "The West won the world not by the superiority of its ideas or values or re-

[79] See Thimm (2007) for an analysis of the affect of American Exceptionalism on the U.S. relationship with global treaties.

[80] Nowhere was this more apparent than during the debate in 2009 on health care. Although every other western nation had some kind of public health care system, at no point did Americans, nor their political leaders ever seek to learn from these systems in developing their own system. All were deemed insignificant to unique situation in America.

ligion (to which few members of other civilizations were converted) but rather by its superiority in applying organized violence. Westerners often forget this fact, non–westerners never do." However, the focus on western contributions to human rights and democracy sustains this unjustified exceptionalism, even though these ideals were found long before the founding of America:

> "Akbar… preached religious tolerance in sixteenth century India; Prince Shotoku introduced the constitution (kempo) in seventh century Japan that insisted that 'decisions on important matters should not be made by one person alone. They should be discussed by many;' and notions of participatory decision–making about important public issues have been a central part of many traditions in Africa and elsewhere." (United Nations Development Programme 2004: 5, *paraphrased*)

C. Universalization of a Culture

Since the dawn of globalization, the relationship between western nations and most of the rest of the world has been one marked by an unequal balance of power and money. In this milieu, the West has largely seen the non–western world as a market for its products and ideas, as well as resources for its industries. Like conquering nations before, it has tried to impose its rules, customs, and hierarchy on others. That is not new – conquering groups have been imposing their worldviews on the groups they have conquered since cultural groups have existed (Dilthey 1910 (2002): 190-191). The ethnocentricity and universal stereotypes described in Chapter One have been critical to the universalization of the conquering worldview and the marginalization of the conquered worldview. However, the western economic and cultural globalization of the past couple centuries has allowed the West to impose its worldview on a scale not seen before in the world. Ultimately, it does not matter whether any of these conquered groups agree with western ideas; the West has written the rules of our global market. The West has appropriated this universalist discourse more effectively than any hostile conqueror could have ever dreamed (Hall 1979). This has narrow discourse about a range of issues to its advantage.

1. Institutionalization of the Western Worldview

Rising western economic and military global power throughout the 20th century, led by the United States (Wallerstein 2003), allowed western nations to institutionalize its worldview within the policy of the major global –

but largely undemocratic (Brecher & Costello 1994) – triumvirate of global institutions that western nations largely control, such as the World Bank[81], International Monetary Fund (IMF)[82], and World Trade Organization (WTO), as well as the Organization for Economic Cooperation and Development (OECD) and some agencies of the United Nations (Korton 1995). As Huntington (1993: 40) describes it: "The West in effect is using international institutions, military power and economic resources to run the world in ways that will maintain western predominance, protect western interests and promote western political and economic values." In a classic example of circular reasoning, free market proponents then point to the dominance of free market capitalism as "evidence" of its superiority and global application. Free market capitalism – or neo–liberalism to its detractors – has become so ubiquitous and indisputable that one of its chief critics called it the *sole thought* (Ramonet 1995).

This western institutionalization is embodied in the United Nations in its Global Compact (UNGC), which claims that its ten universal principles "enjoy universal consensus" (United Nations Global Compact 2007c). The UNGC claims to "promote responsible corporate citizenship, ensuring business is part of the solution to the challenges of globalization… (and)… help realize a more sustainable and inclusive global economy" (United Nations Global Compact 2007a, 2007b). Proponents of the United Nations Global Compact (2007a)[83] see it as an opportunity to advance:

> "human rights, labour, environment and anti–corruption…in business activities around the world, (derived from) the Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption".

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[81] The International Finance Corporation (2009) is billed as "the private sector arm of the World Bank (which)…promote(s) open and competitive markets in developing countries (and) support(s) companies and other private sector partners…"

[82] The stated goals of the IMF combine "working to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world."

[83] It is interesting to note that Goldman Sachs (2007) was chosen to lead a Global Compact study on the *Benefits of Corporate Responsibility*, considering their role in the escalation of the financial crisis in autumn 2008.

In UNGC meetings and publications, UN Secretary General Ki–Moon Ban (2007) links universal values and free market principles:

> "We need business to give practical meaning and reach to the values and principles that connect cultures and people everywhere (United Nations Global Compact 2010: 3)...through the Geneva Declaration[84], we have deepened our collective commitment to embedding universal values in economies and markets."

However, as Hamelink (2004b: 90) points out, the development of the Global Compact as a United Nations project is incomprehensible since the "UN stands for humanitarian values, (while) business firms represent commercial values… (this)…project(s) an image that the UN supports the neoliberal variant of globalization… (and) provides legitimacy to transnational business (in exchange for) voluntary and non–enforceable principles." He points out that this co–option of the United Nations' humanitarian brand by transnational corporations, sometimes implicated in human rights abuses, is fraught with inherent conflicts of interest and has led to suspicion and resentment among developing nations, emphasizing that:

> "As long as the rules for world finance and trade are determined by organizations that serve exclusively the interests of the world's leading elites, and the key international political decisions are taken by such a thoroughly undemocratic institution as the UN General Assembly and its Security Council, it is wishful thinking to believe that future…societies will be inclusive, equitable, transparent and participatory arrangements. All the efforts of civil society organizations — themselves not necessarily representative, democratic and accountable institutions — will not change this" (2004a: 289).

2. Neo–Colonialism

Raiser (2001) makes a vital distinction between the "basic framework of values and responsibilities" underlying the UDHR and claims to the "universal validity of specific symbols and values...as a means of political power and domination." Detractors of this system labeled this entwining of western interests and universal policy *neo–colonialism* (Korton 1995), in which

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[84] Twenty–one point conclusion of the UNGC Leaders Summit on 5–6 July 2007: www.unglobalcompact.org/docs/summit2007/GENEVA_DECLARATION.pdf.

former western colonial powers are seen to exert undue influence over the former colonized nations. Nkrumah (1965: 1, *paraphrased*) first referred to neo–colonialism as the condition in which the "economic system and, thus its political policy, of a nation with the outward trappings of international sovereignty was in reality directed from outside;…Control is most often exercised through economic or monetary means." Nkrumah goes on to argue against neo–colonialism: "Foreign capital is used for the exploitation rather than for the development of the less developed parts of the world…Neo–colonialism is also the worst form of imperialism. For those who practice it, it means power without responsibility and for those who suffer from it, it means exploitation without redress (p. 1, 2)." He argues that the ultimate purpose of neo–colonialism is to ensure that the developing world stays undeveloped for the financial gain of the developed world[85].

> "The rulers of neo–colonial States derive their authority to govern, not from the will of the people, but from the support which they obtain from their neo–colonialist masters. They have, therefore, little interest in developing education, strengthening the bargaining power of their workers employed by expatriate firms, or indeed of taking any step which would challenge the colonial pattern of commerce and industry, which it is the object of neo–colonialism to preserve. 'Aid', therefore, to a neo–colonial State is merely a revolving credit, paid by the neo–colonial master, passing through the neo–colonial State and returning to the neo–colonial master in the form of increased profits (p. 5)."

The success of the World Trade Organization (WTO) in liberalizing international trade to the disproportional advantage of western corporations (Charnovitz 1997) has been held up as proof that the Bretton Woods institutions have been biased towards the West since their inception (Polaski 2005, Kolsky Lewis 2007).

3. Ideological Imperialism

In addition, western private and public sectors have successfully linked universal values, such as freedom, democracy and peace, with very western

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[85] Obadina (2000) argues that focusing blame from underdevelopment on external powers only reinforces the fatalist view that Africans are powerless to improve their own situation – dismissing the potential for grassroots' social and economic movements. This ignores the culpability of African elites, who participate in the global capitalistic system because it is simply an easier way to make money than to develop a local industrial base.

ideas of "economic growth is good" (McKibben 1989: 147), individualism is freedom, and happiness is a pursuit of material wealth (Soros 1998). For instance, the OECD espouses a supra–national policy regime which weaves together "respect for human rights, democratic government, and the market economy" (Guilmette 2007). Global capitalism advocate, Thomas Friedman (1999), illustrates this universalization when he connects social progress with global capitalism: "Every country and company that has improved its labor, legal and environmental standards have done so because of more global trade." Through *ideological imperialism* (Soros 1998) and the appropriation of universalist discourse, western ideals have come to be normalized as "universal" ideals, not as culturally–based ideologies (McFaul 2004).

However, Chua (2004) argues that the West exports a rawer form of free market capitalism (complete laissez–faire privatization) and democracy (universal suffrage for everyone all at once) than it chooses for itself. The former often times enriches an ethnic minority, while the latter politically empowers an ethnic majority. She points to multiple cases where this combination has bred ethnic violence, such as the Indonesian backlash against the commercially dominant Chinese and the Hutu genocide of the Tutsi. Soros (1998: xxvi) equates this rawer form of free market capitalism – the laissez–faire *market fundamentalism* – with *untrammeled individualism*, and shows how it has come to be "regarded as a natural, rational, and even perhaps desirable" behavior.

The West has marketed these "universalized" ideas throughout the world as attainable through the very western notions of perpetual growth, scientific control, and material acquisition, which have brought a host of social ills to western nations. And, the institutionalization – and universalization – of these ideas has dramatically effected policy in other areas, including agriculture, health, finance, culture and poverty alleviation (Gonzalez 2006–2007). Pollution, obesity (Chou et al. 2008), violence (Bushman & Anderson 2001), and "increasing social alienation, depression, drug and alcohol abuse, overspending and overeating" (American Environics 2006) drive material consumption, which causes further environmental degradation, despair and debt. As a result, not only has the U.S. become the largest per capita contributor to climate change, its impact has been magnified by the export of this lifestyle to many non–westerners as well. Solutions to the multiple crises of food, poverty, economic development and security will not be found by trying to continue to export the western lifestyle (Kasser & Ryan 1996). The answer lies in breaking the endless cycle of materialism, both

within western thinking and the messages these nations export. Giving every home in the world a television set will not bring people out of poverty when the programs and commercials will only make viewers want more.

4. Cultural Imperialism

Besides the direct affect on social and environmental systems, this universalization has led to charges of cultural imperialism (Gergen 1996, Rothkopf 1997, Tomlinson 1991), the fear that western media, products, business practices and political institutions undermine local cultures. With the help of the Internet, commercial web sites are now open to the world, offering everything from fashionable Islamic wear to the newly converted (Moors 2007), to childcare tips for the newly delivered[86]. While the presence of Coca–Cola, McDonald's, and blue jeans throughout the world could be seen as "superficial symptoms of a global culture…not necessarily signs that the local culture is fundamentally changing" (Hamelink 2006b), there are a wide variety of examples, which support those who fear the effects of western cultural influence.

I. Van Ginneken (1998) has extensively tracked the concept of "mediated reality," revealing the remarkable influence the media has on shaping society's perception of reality. The rapid consolidation of news sources throughout the world, dominated today by U.S., Dutch, and British owners, has increased the media's ability to shape reality along a western viewpoint. As news moved from a loss leader for networks to a profit maker in the late 1970s, entertainment in the form of news took priority over quality journalism. In order to fit a story into the average nine second sound bite in 1988 (down from 43 seconds in 1968), news reporting today is mediated and interpreted for the viewer, often providing conclusions, not facts (Hallin 1992). This reality is in direct contrast to the self–promoting tag line of Fox News, "We report. You decide." In addition to diluting the quality of journalism and limiting available viewpoints, consolidation of the media has created more powerful and less diverse media organizations. In consequence, newcomers, such as Al Jazeera, were effectively blocked from the U.S. market[87]. This proved disastrous in the lead–up to the U.S. invasion of Iraq in 2003 when

[86] www.babycenter.com

[87] www.aim.org/press–release/aim–protests–ohio–cable–cos–decision–to–air–al–jazeera–english–channel/

Americans could have used their alternative view of events, instead of proving the "junk news of celebrity gossip, sports and weather"[88]. To counter this, Project Censored[89] has been tracking the top stories not covered by the corporate U.S. media since 1976.

II. Al Gore (2008) laments the loss of an educated public in his book *Assault on Reason*, for which he largely blames the *dumbed down*, violent, and desensitized mediated world described above. Politicians throughout the U.S., up to and including the President, were elected on "likable qualities" and "who would you rather have a beer with?" (Zogby 2004). Until 2008, intelligent, educated and deliberative politicians, such as Al Gore in 2000, were belittled as weak, elite, and out of touch. In fact, the 2004 Democratic candidate, John Kerry, was heavily *criticized* for his fluency in French.

III. Gerbner (2000) describes the *Mean World Syndrome*, a direct correlation between viewer's exposure to western news media and their negative views of the world in general. Oliver (1994: 184) showed: "police programs considerably overrepresented violent crimes", compared to the level reported by the U.S. Federal Bureau of Investigation, e.g., only 0.2 percent of the crimes reported to the FBI are murders, while nearly 50 percent of the crimes shown in television programs are murders. The direct correlation between media violence and aggression is still disputed, although proponents of the link, such as Anderson et al. (2003: 81), argue that "the scientific debate over whether media violence increases aggression and violence is essentially over." Others (Freedman 2002, Pinker 2002, Savage 2004) argue against the validity of the methodologies used in this research, as well as the unexplained outliers, such as the lack of direct correlation between media violence and statistical levels of violence. This debate is largely shaped by the millennia–old debate on "nature versus nurture." More recent research (Primack et al. 2009) linked adolescence exposure to television with adult depression.

IV. Research on international television programming has found that simple humor and violence export well because they are simple to translate and play to universally empathetic and recognizable char-

[88] www.freepress.org

[89] www.projectcensored.org

acters and themes (Kuipers 2007). This research supports those who fear the cultural imperialistic reach of this "dumbed down" and more violent mediated reality.

V. Others may point to the export of romance as a positive example. After all, "clear evidence of romantic love was found in 88%...of 166 human cultures surveyed" (Haidt 2006: 124). However, in a world in which arranged marriages (or at least societal pressure to marry within one's ethnic, religious, and socio–economic class) are still prevalent, the western influence on the idea of romance and love as a basis for marriage may not be welcome. Spronk (2007) has shown how the notion of romantic love, as a basis for marriage in western media, directly challenged the traditional basis of marriage among professional women in Nairobi, Kenya. One could argue arranged marriages and even this lesser societal pressure are themselves examples of power disguised as cultural difference. However, for the sake of an argument on cultural imperialism, it is clear that media exported from the West (although the *telenovelas* from South America may share some blame in this particular case) substantially affected local culture. In addition to the effects on marriage, the promiscuous sexual behavior linked to romantic love and dating in western media could have further societal impacts.

VI. Every society has "standards of beauty" (Cleaveland et al. 1979), yet, this ideal differs based on a wide range of factors, such as the physiology of the most predominant members of society, local celebrities, and historical models. Thus, the difference between the average and the ideal is relatively smaller within a given society than when the beauty ideal is determined from the outside. The western beauty ideal portrayed by the media is itself an artificial reflection of western norms[90], and this artificial norm can dramatically alter local ideals. For instance, eating disorders quintupled in Fiji within a few years of the introduction of western television (Becker 1999). Until recently, the western woman defined beauty as fair–haired and light–skinned[91]. This encouraged many women of African heritage

[90] www.campaignforrealbeauty.com

[91] The beauty magazine, Elle, has been repeatedly accused of lightening the skin of cover models of Indian and African descent: http://www.change.org/petitions/view/elle_magazine_apologize_for_trying_to_whiten_indian_skin.

toward harsh skin lightening and hair straightening beauty products[92].

Despite these examples, however, some see the very concept of cultural imperialism as condescending to those deemed susceptible to it. Appiah (2006: 3) argues that fears of cultural imperialism imply that citizens on the "periphery (are) blank slates on which global capitalism's moving finger writes its message." Instead, he argues, people everywhere will "adapt products to suit their own needs, and they can decide for themselves what they do and do not approve of." However, assuming that some members of any culture could somehow approve or disapprove this for the rest of the society, as his own examples imply, smacks of the same infringement on free individual choice he condemns earlier. "Talk of authenticity now just amounts to telling other people what they ought to value in their own traditions" (p. 2). In addition, this free choice dismisses the vulnerability of children and teenagers to manipulation by media messages.

5. Questioning Globalization

Legitimacy for globalization itself has been questioned from several perspectives. It has been called private–public imperialism along the lines of the 17th century VOC (Shorto 2005) and has provoked broader discussions on economic and social justice, larger environmental degradation, and even the validity of globalization ideology itself (Hawken 2007). Stiglitz (2002: 30) argues that global economic integration is fine so long that sovereign nations have the flexibility – and independence – to make their own policies. Problems arise when strict procedures, regardless of whether or not they make economic sense, are instead dictated by (western) global institutions.

In her work on the effects of globalization in the South, Shiva points out: "Through its global reach, the North exists in the South, but the South only exists within itself…Thus, the South can only exist locally, while only the North exists globally…some states are globalizing while some are globalized" (Dobson 2004: 13, 21). As Granitas (2005: 1) notes: "For all the talk

[92] Lighter skin has been an ideal in India, as well as in large parts of Northern Africa, since long before Western influence was felt. However, this was a relative fairness when compared to the average skin tone. Members of society have always taken measures to attain the beauty ideal of its group. However, the differential between the "ideal" and the "typical" is smaller when the ideal is driven from within a group. When ideals are imported from outside, the differential is larger, and therefore, the measures to attain that ideal are more drastic.

about a global village, there are actually two communities in the world today: Americans and everyone else." This criticism is not without merit. While the United States were instrumental in creating the UDHR, they have refused to ratify the Rome Statute – the founding treaty of the International Criminal Court discussed earlier under the same kind of cultural relativist arguments it had dismissed from other nations. It wants to maintain the right to pursue terrorists, weapons of mass destruction, and the vague notion of aggression for its own protection. The American Service-Members' Protection Act (United States Congress 2002), which became American law in 2002, went so far as to authorize an invasion of The Hague, where the ICC is located, to "liberate" any American citizen ever brought before the court. This kind of value inversion argument (Edelman 1985) of deterring "bad" aggression through "good" aggression has fed charges of American exceptionalism.[93] The fact that all the trials in the court to date have been held to prosecute African leaders does nothing to dispel this notion.

Globalization itself is a ubiquitous, yet widely misunderstood, concept (Stiglitz 2002). Hamelink (2006b) resists the use of the word globalization, preferring instead the "process of greater global interconnectivity", which started with the 1648 Peace of Westphalia. He believes globalization positively implies too much of a global solidarity, civil society–type "coziness and village–ness." Hamelink prefers to describe the current spread of communication technology, migration and economic integration as a *spread of modernity*, which has clearly widened the split between the haves and have–nots. Bauman (1998: 89) describes this dualism well:

> "For the inhabitants of the first world–the increasingly cosmopolitan, extraterritorial world of global businessmen, global culture managers or global academics, state borders are leveled down, as they are dismantled for the world's commodities, capital, and finances. For the inhabitants of the second world, the walls built of immigration controls, of residence laws and of 'clean streets' and 'zero tolerance' policies, grow taller…The first travel at will, get much fun from their travel, are cajoled or bribed to travel, and welcomed with smiles and open arms when they do. The second travel surreptitiously, often illegally, sometimes paying more for the crowded steerage of a stinking unseaworthy boat than others

[93] It is sad to note that Israel, the ostensive inspiration for the UDHR, also refused to ratify the Rome Statute.

pay for business–class gilded luxuries– are frowned upon, and, if unlucky, arrested and promptly deported, when they arrive."

This "first world" is not only made up of citizens of western nations; it includes the cosmopolitan, "globalize(ed) from within" (Beck 2002), professional elites living in large urban centers around the globe (Harris 2008)[94]. Appadurai (1996) believes this "*new cosmopolitanism* unites cultural, financial, and political flow within and between young professionals in nonwestern and western societies" (Spronk 1996). As the advertising executive responsible for marketing Pampers Diapers throughout Europe illustrates: "The appeal of marketing messages across cosmopolitan cities is greater than between these cities and their respective rural areas" (Jaspers 2007). Harley (1993: 225) argues: "National boundaries matter little in the contemporary music world, where a Detroit producer may have more in common with a London–based DJ or a Belgian re–mixer than anybody in his or her immediate geographic environs." However, it should be acknowledged that even cosmopolitan members from the South do not have the same mobility as citizens of the North. An Ethiopian doctoral colleague of mine was unable to attend a recent meeting in Germany. Despite the membership of both Germany and the Netherlands in the European *passport–free* Schengen zone, his visa only permitted him entry to the Netherlands.

D. Criticism of Western Worldview Analysis

In the prior sections an argument was developed to explain how the dominant ideas of Protestantism and western science emerged during the Enlightenment, which laid the foundation of a worldview that proposed separation from, superiority over, and exploitation of nature. This worldview in turn facilitated the global expansion of free market capitalism and, in its

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[94] Unfortunately, first world citizens often ignore second world citizens, even those in their own nations. While working on a design for a new theme park in Athens, Greece, the American–educated wife of one of our clients joined an initial meeting. Like many of our clients, our clients were members of the elite in their country, and they had very intellectual ideas about the design. My British (born), Congolese (raised), Belgian (nationality), Polish (ethnicity), American (living) boss tried to explain that, while it was important to remain true to the knowledge base in order to satisfy the experts, the park itself needed to be focused to the *common man,* as they would make up the bulk of the visitors. In describing the *common man*, he referred to Joe Six–Pack, Jan Kees, etc, and asked what the Greek equivalent was. The wife responded that the concept was American and that those sorts of people did not exist in Greece. She either did not even see the taxi drivers, doormen, gardeners, shop keepers, etc. which she surely must encounter on a daily basis, or she assumed that they shared her intellectuality.

wake, many of the world's current social and environmental challenges. There are, of course, detractors to this kind of argument. Tellegen and Wolsink (1998: 60–3) outline some of these arguments, which include evidence of environmental exploitation outside the West, alternative views within the Christian faith, and resistance within the western world against this separate–superior–exploitative worldview. The following section addresses each of these arguments in turn.

1. Environment Exploitation Outside the West

Environment exploitation is definitely found outside the West. The most oft–cited examples are the communist former Soviet Union and Maoist China, non–western developed or rapidly developing nations, such as Japan and India, other mono–theistic (Islamic) nations, as well as within the very indigenous communities often held up as shining examples of the sort of symbiotic view of nature, which should lend itself to exemplary environmental care.

a. Communist Soviet Union and China

It has been argued that the institutionalized Soviet worldview was an extreme expression of the belief in western science, e.g., the complete denial of spirituality, the belief that science could *correct nature's mistakes* (Husband 2006). Furthermore, the underlying ideology of Marxism–Leninism was "extreme ideological support for industrial production…typical…of western belief in progress by exploitation of nature" (Tellegen & Wolsink 1998: 65). Despite vast historical, theological, and cultural differences, Maoist China took economic and technological direction from the Soviets as their model for development. While the breakup of the Soviet Union in 1989–90 was largely touted in the western world as the death of communist ideology (Brzezinski 1990)[95], one could argue that this Marxism–Leninism worldview towards nature is alive and well in China. According to the Evolution of Global Values by American Environics (2006):

> "Chinese Confucianism, a powerful political ideology that emphasizes self–control, adherence to hierarchy and order, has many similarities to western rationalism and has thus been better able to advance modernization than Maoist communism — even though

[95] While a significant percent of the people within the former Soviet bloc now believe they were personally better off under a communism system, clear majorities still approve of the change to a western system of capitalism (Pew Research Center 2009b).

> many Confucian values are passed off as communist…Confucianism has been crucial to China's rapid (if ecologically precarious) economic development for its post–Mao governments (p. 23)"

Yet, in the twenty years between the dissolution of the Soviet Empire and the political and economic rise of China, the Chinese have become aware of their impact on the environment to an extent still not appreciated by the Russians (nor the Americans). According to a report from the Pew Research Centre (2007a), more than 70 percent of Chinese citizens view environmental issues a major concern. In contrast, only 43 percent of Russians (and 37 percent of Americans) feel the same way. As of 2007, China now is the largest annual contributor of carbon dioxide emissions in the world and often portrayed in western mainstream media as unwilling to forgo its economic growth to address climate change. Ironically, the Chinese already have higher fuel standards, more efficient coal power plants, and derive nearly twice as much of its electricity from renewable sources than does the U.S. In addition, they have quadrupled their GDP while only doubling energy consumption and have already committed to reducing this amount (Pew Center on Global Climate Change 2009). Chinese policy makers have made the link between environmental policy and a healthy economy and population. By 2009, "strong, national policies aimed at reducing global warming pollution and incentivizing the use of renewable energy" helped China overtake the United States as the "global leader in clean energy finance and investment" (Pew Charitable Trust 2010: 4) by nearly a 2–1 margin. This, coupled with greater awareness of the Chinese population, will likely ensure that it does not follow the same environmentally-disastrous path as the Soviets. In addition, despite the official atheism of China, traditional Daoism still holds sway in Chinese society. Daoism rejects human dominance over Earth and its other inhabitants (Sylvan and Bennett 1988) and, instead, focuses on a simple lifestyle, in harmony with nature, which "leaves space for the development of future generations" to attain "spiritual freedom…free of the burden of material desires" (Chen 2003). Some of its main tenets, which Dao followers claim support environment protection, have led to modern activism to protect sacred natural spaces from tourism, development, and logging (Alliance of Religions and Conservation 2008).

b. Pantheistic Japan and India

This acute concern for the environment is also found in Japan, where 70 percent view environmental issues a major concern (Pew Research Center 2007a). As the home of the Kyoto Protocol signing and the world's second

largest single economy after the U.S.[96], Japan remains publicly committed to fulfilling its Kyoto commitment. The Land of the Rising Sun is feeling the effects of climate change in the form of higher temperatures and precipitation, which is slowly killing its famous Zen gardens, increasing sea levels, and affecting public health (Hulme & Sheard 1999). Japan, however, is struggling to find sources of carbon to cut as it is already relatively more energy efficient than its western counterparts.

The current economic development within Japan is still largely based on the American market ideas of the Marshall Plan, which was implemented after the Japanese surrender of WWII. These ideas have been increasingly at odds with its traditionally pantheistic faith. Pantheistic faiths see humankind, the natural world, and the spirit world as one living, interconnected organism. Damage to one part, i.e., one person, one animal, one tree, is damage to the self, as all is one. All world–based goods, natural or man–made, are distractions from attaining the ultimate goal of complete peace and detachment from this world, which is called *nirvana* in Buddhism. Using less of everything is better. Furthermore, beliefs in reincarnation may also inspire environmental stewardship, since believers never know what form they may take if they return to this Earth. It is perhaps this counter–balance which has kept Japanese per cap emissions in line with the some of the most ecological sound nations of the West[97].

In another traditionally pantheistic – yet rapidly growing – nation, nearly 30 percent of Indians see themselves as "hurting the world's environment", more than any other country (Pew Research Center 2007a). Some in the Hindu community lament: "Unfortunately, Hindus have forgotten th(e) Vedic view of the earth and don't protect their natural environment… part of the challenge of the modern Hinduism is to reclaim its connection to the earth" (Frawley 2000). Meanwhile, Buddhist leaders fear that an increasing perception of a self separate from the natural world is not consistent with Buddhist teachings of interconnectedness. "We are all part of each other and the world we inhabit, and whenever we harm another being or injure our environment, what we are hurting is ourselves" (Friends of the Western

[96] The total economy of all member states to the European Union is larger than both. However, emissions requirements under Kyoto are assigned by nation state.

[97] http://mdgs.un.org/unsd/mdg/Data.aspx

Buddhist Order 2007)[98]. Like Japan, India's economic system was shaped by a western nation, in its case, the former British empire. Today, its elite are still largely educated at western, English–speaking universities[99], and much of its economic growth is dependent upon offering western style services at a fraction of the cost. Poster (2007) even describes *national identity management*, in which employees of the now ubiquitous Indian call centers servicing western customers assume western identities to hide their own location and nationality. Despite the systemic influences of the western worldview on the development paths taken by both of these nations, however, each of their pantheistic worldviews continues to restrain the full execution of western-style environmental destruction and citizen apathy.

c. Muslim Nations

Others point to environmental exploitation found in other monotheistic religions, such as Islam, in which man is also accorded a special position in the universe. The Qur'an would seem to support humankind's separation from and superiority over nature (Tellegen & Wolsink 1998) and also speaks of humankind as stewards of the earth. Islamic scholars also speak of "loving care of the natural environment… (as)…training for the afterlife in the company of God and the angels in an environment that is perfectly balanced, peaceful, and verdant (Denny 1998).[100]" Given that Islam evolved out of the same roots as Christianity, this common idea of stewardship should not come as a surprise. Yet, Islam would also seem to support natural theology, whereby the natural world is considered to be the sacred creation of Allah, "a living, holistic, orderly and perfect world, populated by angels, jinn, human beings, and animals…the universe, with all its causal processes is the prime sign (aya) and proof of its Maker" (Özdemir 1997: 15). While some Islamic scholars (Rahman 1980: 79) claim the Qur'an taught that the natural world was created "to serve man by meeting his vital needs", other Islamic scholars claim "the sole aim of nature is not only to

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[98] It is important to note here that many see these eastern faiths as ethical and philosophical systems, not traditional religions. However, they function as traditional religions in the sense that they define a specific worldview to which its followers must adhere to achieve goals beyond an earthly life.

[99] www.forbes.com/2007/08/05/india–america–students–oped–cz_aaw_0813students.html, www.timeshighereducation.co.uk/story.asp?storyCode=401182&sectioncode=26

[100] These scholars also call for a "green jihad" (Afrasiabi 1995: 40) to address the global climate crisis…(Denny 1998). However, many Islamic countries, including those in energy resource–rich Middle East and the deforestation–center of Indonesia, are largely guided by national interests, not religious responsibility.

serve human beings and their ends" (Özdemir 1997: 19). The Qur'an also speaks about the interconnectedness of man and the natural world, warns against waste (Qur'an 7: 31[101]), destruction (Qur'an 26: 151–152), and over-population. However, the Middle East, where Islam originated and continues to dominate as a worldview (United States Central Intelligence Agency 2011), is also the site of much of the world's oil. Islamic leaders sat on the world's largest supply of crude oil for centuries and only engaged in large–scale oil development – and its auxiliary environmental exploitation – upon control by and demand in the West. This has made it a geo–political battle field between western nations since oil first started to fuel the industrial revolution in the early 20th century. The resultant instability of these resource battles has led many Middle Eastern citizens to fear the spread of nuclear weapons and religious and ethnic hatred as bigger global dangers than environmental problems (Pew Research Center 2007a).

d. Indigenous Exploitation

Indigenous ecological exceptionalism, the belief that "indigenous peoples... have always been fastidious guardians and sensitive managers of the environment" (Grove 2001) is challenged by cases in which indigenous communities themselves display destructive environmental behaviors. Distracters claim this exceptionalism prevents any real debate on the ecological foundation of indigenous behavior (Krech 2000). Indigenous people have been accused of engaging in destructive environmental behavior for millennia. Landscape firing and/or wide scale hunting of the earliest aboriginal hunter–gatherers in Australia have been blamed for the mass extinction of the continent's large mammals (Miller et al. 2005); yet this causal effect is still disputed, as other researchers claim this mass extinction was caused by non–anthropogenic climate change (Trueman et al. 2005). Likewise, landscape firing of Native American hunter–gatherers have been blamed for the demise of a number of large North American mammals (Johnson 2009); yet, the underlying research actually suggests that the causal relationship is flipped. The loss of mammals led to changes in vegetation, which then led to increased landscape firing (Gill et al. 2009). Finally, the farming activities of early Polynesians have been blamed for the extinction of thousands of bird species; yet, there is no direct casual "evidence". The researcher admits he simply cannot think of another plausible explanation (Steadman 1989). In more current eras, much of the destructive behavior exhibited by indigenous groups can often be traced back to consumption in western nations,

[101] "eat and drink, but waste not by excess; verily He loves not the excessive"

e.g., logging, poaching, labor, energy, and agriculture for export or urban areas (United Nations Environmental Programme 1992), and the resultant displacement of societies. As the World Commission on Protected Areas (2000) found:

> "Where indigenous and traditional peoples are interested in the conservation and traditional use of their lands, territories, waters, coastal seas, and other resources, and their fundamental human rights are accorded, conflicts need not arise between those peoples' rights and interests, and protected area objectives (p. 11, *my emphasis*)."

2. Alternative Views within the Christian Faith

Other, more symbiotic interpretations of humankind's relationship to the natural world, do exist within Christianity, most notably within Catholicism. Even White (1967) himself, one of the strongest proponents of the 'separate–superior– exploitative' interpretation outlined in earlier sections, argued that retaining a strong, mystical connection with nature has a distinct tradition within Christianity, in the form of Saint Francis of Assisi and the enduring tradition of *natural theology* (Harrison 2006, Paley 1809). However, while Pope John Paul II proclaimed St. Francis the patron saint of ecology in 1980, White also argues that Franciscanism was suppressed and marginalized for centuries within the powerful Catholic church. The *interactionist* belief of natural theology, that evidence of God could be found in nature, was rejected by the church in favor of the *dualist* belief in "deistic distance" (Torrance 1970: 121). Today, *interactionist* natural theology remains a hotly debated idea within Protestantism (McGrath 1993: 165–170), especially by the Evangelical ministers who consider it "natural idolatry". Tellegen and Wolsink (1998) point to a third interpretation – that of the stewardship practiced by the Benedictine monks. However, this attitude still stems from the core idea that nature is a separate entity which humankind must take care of; the idea that humankind holds a special leadership role in the natural system which was bestowed by an omnipresent god, not of this Earth. It must be noted that all of these alternative views exist within Catholicism, while the institutionalized worldview held in the United States is grounded firmly in Protestantism.

3. Resistance within the West Itself

In response to the final criticism – that some westerners have always resisted this separate–superior–exploitative worldview of nature – it is important

to remember nearly any society, especially those of our multicultural, global–mobile world, includes members with a diversity of worldviews. Douglas and Wildavsky (1982) plotted responses to risk along two intersecting dimensions – individualism versus collective control (group) and hierarchical versus egalitarian societies (grid) to illustrate four different worldviews – fatalists, hierarchists, individualists, and egalitarians. Perhaps not surprisingly, each of these worldviews identifies and addresses risk in ways which uphold the groups existing social structures. Dake (1992) later mapped the four worldviews identified in Douglas and Wildavsky's (1982) classic cultural theory of risk onto larger *Myths of Nature*. According to his work, fatalists view nature as unpredictable; hierarchists see it as controllable within boundaries, individualists viewed it as stable; and egalitarians see it as precarious[102]. Steg and Sievers (2000: 253) "link(ed) risk perception to perceived solutions (and the ability) to reduce these risks." Finally, Lima and Castro (2005) evaluated the link between *environmental hyperopia* "(the discrepancy between environmental concern towards global and local targets)" and these worldviews. A rough overview of some additional analyses of environmental discourses can be found in Appendix C.

However, while a diversity of worldviews may flourish within nations[103], particularly those supportive of human rights, every nation has one more predominant worldview. As Parsons and Smelser (1956: 16, 51) have shown: "a social system is always characterized by an institutionalized value system…(and prestige) is accorded as a reward for conformity with a set of values." The domination and control of nature is a core element of this *dominant worldview* (Cramer 1998, Devall & Sessions 1985) and it is this worldview which has shaped the rules by which our global society lives.

E. Chapter Summary

This chapter looked at how the *dominant worldview* in the West evolved out of Christianity – Protestantism in particular – and western science and led to the free market capitalism. Western ideas of ownership, personhood, growth, standardization, centralized decision making, justice, and happiness were then contrasted with alternative approaches to highlight key dif-

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[102] This research must be read with one caveat in mind: while Douglas' work originated in a small African village, most applications of group/grid theory have been made wholly within a western research base. Therefore, these categories cannot simply be projected beyond western borders to vastly different types of societies to try and explain differences in worldviews across the world.

[103] Perhaps this is what Hofstede's (2001) simplistic categories allude to.

ferences between these dominant and alternative worldviews. The key conceptual insight from this chapter, though, is the demonstration of how this dominant worldview has been universalized through the intertwining of universal human rights and culturally–relative western ideas. Chapter Three will continue the Diagnostic Task of Section Two by tracing two core deep frames of this dominant western worldview through the western scientific and social construction of anthropogenic climate change.

THREE

The Western Construction of Climate Change

> "Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects…until we reject the Christian axiom that nature has no reason for existence save to serve man…we shall continue to have a worsening ecologic crisis." White (1967: 1205, 1207)

> "It is possible to…(know) the nature and behavior of fire, water; air; stars, the heavens, and all the other bodies which surround us…(and) make ourselves masters and possessors of nature." Descartes (1637 (2008))

Although humankind has always suspected it could alter the natural world (Weart 2007), it was a Swedish scientist, Svante Arrhenius, in the late 19th century, who first introduced the idea that burning fossil fuels would add carbon dioxide into the atmosphere, creating a *greenhouse effect* which would raise the temperature on Earth. However, his idea was either dismissed or viewed as a very long term and, thus, non–alarming issue. As temperatures rose in the 1930s, more questions were raised about the greenhouse effect, but it was a relative amateur, G.S. Callendar, (1938) who:

> "assembled considerable evidence to show an upward trend in temperatures for the first four decades of the 20th century. When he compared that data with changes in glaciers, increases in atmospheric carbon dioxide coming with the Industrial Revolution, and other readings, he reached the now scientific conventional wisdom that the use of fossil fuels caused a rise of the concentration of CO2 in the atmosphere and that, in turn, was linked to increased radiation and a resultant rise in global temperatures" (Launius 2007).

At the time, however, for many researchers located in the colder regions of

the northeastern Unites States and Western Europe, any future global warming was actually seen as a positive development. In 1967, scientists began to predict that Earth's temperature would rise a few degrees within a century. This was a clear departure from earlier predictions which had forecasted that this change would occur slowly over a 10,000 year period of time. However, the scientific models remained speculative, and it was not until the western environmental movement began in the early 1970s that serious attention was focused on the climate. This movement was fueled in part by books, such as *Silent Spring* (Carson 1962 (2002)), which documented humankind's destructive effect on the environment. Some studies pointed to a new ice age, while other studies predicted coastal areas would be flooded as the ice caps melted (Weart 2007).

In Stockholm, 1972, the United Nations organized the world's first environmental meeting of states, the *Conference on the Human Environment*, which recognized the links between a healthy environment and good quality of life. A *New York Times* poll in 1978 found climate scientists evenly split on whether there would be warming, cooling, or no particular change. Scientists admitted they did not understand enough about the climate to make accurate predictions, but most agreed that a climatic change in the future could pose a serious problem. As research money began to be directed to study the climate, scientists came to realize the climate was a very intricate system influenced by multiple factors. The climate in which humans live in relative comfort came to be understood as "delicately balanced (so) that almost any small perturbation might set off a great shift" (Weart 2007). By the late 1970s, temperatures were clearly rising, and some scientists began to call for policy to address it. In 1972, the Declaration of the United Nations Environmental Programme (1972: 1) *Conference on the Human Environment* stated that:

> "man has acquired the power to transform his environment in countless ways and on an unprecedented scale…We see around us growing evidence of man–made harm in many regions of the earth…(including) undesirable disturbances to the ecological balance of the biosphere."

By 1981 "more than a third of American adults claimed they had heard or read about the greenhouse effect, and nearly two–thirds thought the problem was serious. Russian climate scientists, in particular, were convinced that global warming was already manifested and urged their foreign col-

leagues to acknowledge it" (Weart 2008). In 1987, the *Bruntland Report* highlighted the dramatic human effects from environmental degradation (United Nations General Assembly 1987). Following the record heat of 1988 and increasing alarm and coordination from scientists, the World Meteorological Organization (WMO) and UN Environmental Program established the Intergovernmental Panel on Climate Change (IPCC). Bill McKibben (1989) declared *The End of Nature*, and the final declaration of the United Nations Environmental Programme (1992) Conference on Environment and Development held in Rio de Janerio, stated:

> "States shall cooperate in a spirit of global partnership to conserve, protect, and restore the health and integrity of the Earth's ecosystem…where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost–effective measures to prevent environmental degradation."

On 11 December 1997, the legally binding Kyoto Protocol was passed, which stated that: "by 2008–2012,…industrialized countries will reduce their collective emissions of greenhouse gases by 5.2%,... measured against a baseline of 1990" (United Nations Framework Convention on Climate Change 1997). As per the agreement, the protocol entered into force on 16 February 2005, following the ratification by "at least 55 countries representing 55% of the total 1990 emissions from developed countries"[104].

In 2001 the IPCC published a synthesis report for policymakers, which said: "Earth's climate system has demonstrably changed on both global and regional scales since the pre–industrial era, with some of these changes attributable to human activities" (p.4). In 2004 a popular film, *The Day After Tomorrow*, vividly illustrated the possible effects of rapidly–accelerated cli-

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[104] Given its historic responsibility for GHG emissions, the disastrous environmental legacy of the former Soviet Union and the rejection by the U.S., its former antagonist, many observers were surprised when Russia ratified the Kyoto Protocol in 2002. In fact, its ratification triggered the entire protocol into force. While the European Union and Japan had pressured and offered compromises to Russia, Russia was seen to have entered into Kyoto out of economic and foreign policy considerations, not environmental ones. According to an extensive study on Russia's later role in the Kyoto Protocol: "environmental concerns are not among the top priorities. People are rather worried about unemployment, poverty, a sharp decrease in the standards of living, and day–to–day survival. The public perception of climate policy is that global warming is not so bad for cold Russia and that the economic compensation from the West for the years of transition from communism is justified" (Bernard et. al 2003: 4, *see this report for a more detailed analysis*).

mate change. In the beginning, a climatologist tries to convince the U.S. government of the coming change. Mirroring the U.S. federal policy in place at the time the film was released, he is dismissed[105]. The climate changes render the U.S. unlivable and, in a moment of immigration irony, U.S. refugees fleeing south flood the Mexican border, where they are (temporarily) denied entry. The film was met with claims of exaggeration, yet many environmental advocacy organizations, such as Greenpeace, saw it as an opportunity for discussion about climate change and helped to promote the film. Around this time, a Taylor Nelson Sofres poll in 2006 reported that, while 85 percent of Americans believed global warming "probably is occurring" (80 percent believed so in 1998), less than 40 percent were "very sure" of it. However, 49 percent said global warming was personally "extremely important" or "very important" to them (31 percent said the same in 1998) (Langer 2006).

During the winter of 2006–2007, new studies showed an acceleration of climate change beyond even the most dire predictions. When the IPCC released its *Summary for Policymakers* on 2 February 2007, it almost unequivocally confirmed anthropogenic climate change was heating up the planet, causing stronger effects, such as El Niño, forest fires, and severe droughts. The media coverage following this report was fueled by the subsequent Academy Award on 25 February for Davis Guggenheim and Al Gore's feature documentary about climate change, *An Inconvenient Truth*. As the northern hemisphere's summer heated up, the Arctic icecap began melting three times faster than even the most pessimistic prediction. This melting threw the plight of the polar bears into the public spotlight. The worldwide *Live Earth* concerts on 07–07–07 fed this increasing media coverage. The focus peaked on 12 October when one of the concert's organizers, Al Gore, along with the IPCC, was awarded the Nobel Peace Prize "for efforts to build up and disseminate greater knowledge about man–made climate change, and to lay the foundations for the measures that are needed to counteract such change" (Mjøs 2007). The "critical threshold" (van Ginneken 2003: 186–187) of public awareness, as measured and reported in the BBC (2007) World Service Poll previously mentioned, had been crossed.

A. Growing Awareness

This awareness built at many levels — globally, regionally, nationally, and

[105] His dismissal is reminiscent of the mythological figure, Cassandra, who is doomed to know the future, but have no one believe her.

locally — in dialogue between, and within, official public and scientific discourse on climate change, as well as members of the civil and private sectors[106]. Like other trans–national legal institutions, treaties, and obligations[107], international negotiations on climate change have been facilitated by the United Nations. Following years of conferences and the involvement of multiple UN branches, the UN helped to negotiate the world's first environmental treaty, the Kyoto Protocol. The duties related to enforcing the Kyoto Protocol (and facilitating the negotiation of a post–Kyoto treaty) have been managed by the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC), which relies upon reports from the independent, scientist–led Intergovernmental Panel on Climate Change (IPCC). Under these two organizations, the discourse has focused on building scientific consensus and political will, multinational negotiation, global governance, and compliance verification. Other complementary UN organizations advocate for a range of auxiliary issues, such as biodiversity, forest protection, organic agriculture, poverty alleviation, and sustainability.

The foundation of the Kyoto Protocol in assessing responsibility for climate change is the notion of *common but differentiated responsibilities*. Those countries with significant historical responsibility, the cumulative emission effects of industrialization over the last century, as opposed to simply looking at current emission levels and future projections, are referred to as Annex I Parties. This group, which includes western nations, Japan, and Russia, is responsible for 63.7 percent of worldwide greenhouse gas emissions (United Nations Framework Convention on Climate Change 2008). The western nation subset of Annex I Parties and Japan are referred to as Annex II Parties. This subset has further responsibility to provide non–Annex nations with both the financial resources and climate friendly technologies to help them combat climate change and build their economies.

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[106] There are multiple definitions of the private sector, but it is generally agreed to include economic activities independent of government control. Private non–government organizations (NGOs) were historically included when society was simply divided into public (government) and private (non government) sectors. However, a third sector, comprising non–profit – or civil – sector, such as NGOs, faith and activist organizations, and unions, has been defined as distinct from the public and for–profit private sectors (Salamon & Anheier 1992). Therefore, this dissertation uses the more specific definition of the private sector as economic activities "carried on for profit." Non–profit organizations, such as NGOs, faith and activist organizations, and unions, help make up the civil sector..

[107] For example, the International Criminal Court (ICC), Antarctic Cooperation, Outer Space Treaty, Law of the Sea, and the Universal Declaration of Human Rights (UDHR).

In the United States, the official stance since the Kyoto Protocol has largely been delay and denial. These positions held despite judicial rulings and near consensus among their own domestic scientists. The dominant discourse had been that, while climate change may be a problem, no solution must be allowed to harm either energy security or the economy. Under the Democratic Clinton Administration, the U.S. signed the Kyoto Protocol, but the subsequent Republican Bush Administration refused to ratify it, citing an inherent disadvantage to the American economy since rapidly developing countries, such as China and India, had no reciprocal obligations. During its eight year tenure, the Bush Administration was repeatedly accused of hiding scientific evidence of climate change (Goldenberg 2007) and gagging its own scientists (Havemann 2007). However, in response to growing political pressure and negotiations on a post–Kyoto agreement in Bali in December 2007, the Bush Administration created an alternative forum known as the Major Economies Meetings (MEM) on Energy Security and Climate Change. The forum was predicated on the belief that bringing together the 16 nations (plus EU and UN representatives),[108] which produced more than 75% of all global carbon emissions of as 2006[109], could fast–track the post–Kyoto negotiation process. This dual track process gave optimists hope the U.S. was finally taking a leadership role in climate change mitigation. Others feared that it was simply one more delay tactic. While some argued that the MEMs would accelerate global negotiations on climate change, the exclusion of the other 176 nations of the world, including most of the developing and undeveloped world, ensured that the negotiations would serve those developed and rapidly developing nations' own self–interest. Not surprisingly, the basis for the entire meeting was framed specifically around economic feasibility, the continued use of fossil fuels, the key role of technology, and the right of every nation to grow:

> "It is only through strong economies that we can sustain the investment necessary to achieve lasting solutions. While all countries must do their part to reduce emissions, we should not seek to impose on any country's measures or frameworks that thwart their efforts to meet the legitimate aspirations of their people for better and more prosperous lives" (White House 2007)

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[108] Australia, Brazil, Canada, China, France, Germany, Indonesia, India, Italy, Japan, Mexico, Russia, South Africa, South Korea, the United States, and the United Kingdom.

[109] http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=749&crid=

The United States is the largest per–capita emitter and the largest total historical emitter in the world, and "pluralities nearly everywhere (including one third of Americans) name the United States as the country that is doing the most damage to the world's environment" (Pew Research Center 2007a: 29). Yet, in 2007, only 23 percent of college–educated Republicans in the U.S. thought global warming was attributable to human activity compared with 75 percent of Democrats (Pew Research Center 2007b). In the same year, while the percentage of all Americans who viewed "environmental problems as a major global threat (grew) from 23% to 37%, the Chinese were far more likely (70%) than Americans to cite environmental problems as a top global danger" (Pew Research Center 2007a). Still, 70 percent of Americans believed the federal government should do more to deal with climate change (Washington Post 2007). The resulting increase in public demand for governmental action drew together some unusual allies. "Instead of bashing old foes…influential voices in the climate debate with roots on the left or the right tend to chide their own political brethren and urge a move to the pragmatic center on climate and energy" (Revkin 2007). From the conservative right, Newt Gingrich argued: "a healthy environment is necessary for a healthy democracy and economy" (Gingrich & Maple 2007). In an address to the environmental community, Nordhaus and Shellenberger (2004) challenged the environmental movement itself to stop its doomsday messaging and actively work toward twin goals of energy research and societal adaptation to the climate changes that are already inevitable. Some environmentalists saw any suggestion of adaptation as paramount to the failure of mitigation policy[110].

The 2008 presidential election in the U.S. forced both major parties to clarify their policy stances vis–à–vis climate change. The Republican candidate, John McCain, favored a market–based climate change policy which "allow(ed) the market to decide and encourage the lowest–cost compliance options" (McCain-Palin 2008). While he made a notable shift from prior Republican administrations with his unequivocal acceptance of anthropogenic influence and sense of urgency to actively mitigate it, he also chose a running mate who did not attribute climatic change to human activity (Coppock 2008). The Democratic candidate, Barack Obama, outlined a broader plan which defined climate change as much of an economic and national security issue as an environmental one. His plan (Obama for America 2007,

[110] 'Adaptation' implies we should simply adapt to any climatic change; 'mitigation' implies we should prevent it.

2008) accepted the 80 percent target cut in emissions by 2050 to avoid the worst effects of climate change (Gore 2006, Hansen 2007, 2008, Hansen et al. 2008, McKibben 2007), which would have been considered political suicide only a year before.

Obama's first federal budget (for the fiscal year 2010 starting on 1 October 2009) advocated an "emissions reduction program to reduce greenhouse gas emissions 14 percent below 2005 levels by 2020, and approximately 83 percent below 2005 levels by 2050" (Office of Management and Budget 2009: 21). Prior to the Conference of the Parties (COP) Meeting in Copenhagen in December 2009, Obama announced he would continue the Major Economies Meetings (MEM) begun by the Bush Administration (White House 2009)[111]. Until Congress passes climate change legislation, however, the Obama administration is trying to use existing global treaties and domestic agencies to implement short–term GHG reductions. In April 2009, the Environmental Protection Agency (2009) declared six GHGs to be health–damaging pollutants, which then allows them to regulate them without further legislation, and in June it granted the state of California the right to raise fuel standards as a way to lower emissions. At a global level, the Obama Administration has proposed regulating one of the most potent GHGs – HFC – under the existing Montreal Protocol. Because 195 nations, including the U.S., India, and China, have already ratified this protocol, it would be immediately binding – again eliminating the need for a new treaty (Heilprin 2009).

In the absence of early political leadership at the federal level, political leaders at state and city levels increasingly took on the task of responding to the concerns of civil society (Vanity Fair 2006a, b). Two regional groups, the Regional Greenhouse Gas Initiative[112] (RGGI) and the Western Climate Initia-

[111] www.whitehouse.gov/the_press_office/Fact–Sheet–Meeting–the–International–Clean–Energy–and–Climate–Change–Challenges/

[112] Includes Maine, New Hampshire, Vermont, Connecticut, New York, New Jersey, Delaware, Massachusetts, Maryland, and Rhode Island. The American and Canadian states of Pennsylvania, the District of Columbia, Québec, and the Eastern Canadian Provinces of New Brunswick, Nova Scotia, Prince Edward Island Newfoundland and Labrador have observer status.

tive[113] (WCI), initiated their own regional cap–and–trade systems. The RGGI system held its initial auction of carbon dioxide (CO2) allowances on 25 September 2008, and the WCI was slated to begin in January 2012. These two regions of North America had long been innovators on environmental policy, and the details of their cap–and–trade systems would likely frame any future overall national policy[114].

On the other side of the Pacific Ocean, Australia saw a major shift in policy with the defeat of John Howard's conservative government in 2007 to the Labour Party. While this defeat was based on many issues, not the least of which was simple party fatigue after 11 years of Conservative rule, a prolonged drought throughout much of Australia had dramatically increased climate change awareness. This awareness did not help the reelection efforts of John Howard, a man who repeatedly scorned climate science. The very first act of newly elected Prime Minister Kevin Rudd was a highly publicized signing of a ratification of the Kyoto Treaty. The continuing drought has been classified by many Australian scientists as a permanent change in climate, not part of a natural 10–year or even 100–year cycle. In an annual poll by the Australian National University (2008), a majority of Australians saw climate change as the biggest threat to future global well–being. Across the Tasman Sea, New Zealand remains committed to meeting its Kyoto obligations. Yet, critics felt that its exclusion of agriculture from its Emissions Trading Scheme until 2013 – which accounted for half of its emissions – would make this impossible (Greenpeace 2008).

In contrast to Australia and the U.S., Canada's government has moved further away from active climate change engagement in recent years. Under the former Liberal government, Canada signed the Kyoto Protocol in 1998 and ratified it in 2002. Since Conservative Steven Harper was elected in 2006, he has claimed to recognize the need for urgent action on climate change, and his administration has publicly appealed to resistant G8 leaders, namely Russia and the U.S., to play a wider role in an aggressive, science–based response to climate change (Harper 2008). However, soon after the Conservatives took power, they announced that Canada would not meet

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[113] Includes Arizona, California, Montana, New Mexico, Oregon, Utah, Washington, British Columbia, Manitoba, Ontario, and Quebec. The American, Canadian, and Mexican states of Alaska, Colorado, Idaho, Kansas, Nevada, Wyoming, Saskatchewan, Baja California, Chihuahua, Coahuila, Nuevo Leon, Sonora, and Tamaulipas have observer status.

[114] Unfortunately, many of the federal climate bills under discussion would eliminate the states' right to create these systems.

its Kyoto requirements, claiming they were unachievable. Andrew Weaver, one of Canada's leading authors of IPCC assessment reports, claims the administration is ignoring the science of its own climate scientists and forbidding scientists from talking about climate change with the media in order to protect the highly controversial oil–sands industry in Alberta (Smith 2008).

As with most other policy areas, members of the European Union (and European Free Trade Association) were not necessarily of one mind in addressing climate change. However, every member of the European Community ratified the Kyoto Protocol, the European Parliament legislated ambitious emissions goals, and the European Commission rolled out the world's first (and largest) emission credit trading market in 2005. Yet, the Stern Report in 2006 still sent shock waves through Europe, "The scientific evidence is now overwhelming: climate change presents very serious global risks, and it demands an urgent global response…The economics of climate change is shaped by the science;…therefore we start with the science (Stern 2006: i, iv)." Most significantly, it was the first report conducted by one of the nations so implicit in climate change, which unequivocally confirmed the existence of anthropogenic climate change and its devastating effects on people (300 million climate refugees) and economies (20 percent decrease). Additionally, it was conducted, not by committed climate scientists, but by doubting economists. The report outlined the modest investment needed to reverse it (1 percent of Global GDP) and introduced the heretofore fringe idea of *full social costing* of products and services into mainstream discourse.

The bluntness of the report and the credibility of its source bolstered the diplomatic efforts of some prominent European leaders, notably former British Prime Minister Tony Blair and current German Chancellor Angela Merkel, to persuade the then resistant United States to reengage. Although these diplomatic efforts ultimately failed during the Bush administration, the European effort greatly aided the increased awareness reflected in the BBC World Service Poll, in which seventy–nine percent of citizens from twenty-one nations were found to believe that: "human activity, industry and transportation, (were) significant cause(s) of climate change,… (and ninety percent) say that action is necessary to address global warming" (BBC 2007) Even when the financial crisis of late 2008 threatened to sideline the continued implementation of climate change mitigation, the European Union insisted its member states would still meet its Kyoto commitments.

B. Blame and Responsibility

Even though the parties to the UNFCCC agreed that the "largest share of historical and current global emissions of greenhouse gases has originated in developed countries" and "per capita emissions in developing countries are still relatively low,[115]" there has been little serious discussion about historical responsibility for emissions. Even after the Stern Report, European media were likely to emphasize that their own nations had a relatively small impact on emissions and point repeatedly at the large current emissions producers like the U.S. and rapidly developing nations, such as India and China. India and China have been called to task by Annex II nations, primarily the U.S., Canada, and Australia, for their perceived equal future responsibility with other historical western emitters. Their exclusion from the group of Annex I Parties, i.e., nations with a specific emissions target, was the excuse the Bush Administration used not to ratify the Kyoto Protocol.

Since 2005, dialogue and negotiations have increased between developed and rapidly developing nations as G8 countries included the "+5" nations of China, India, Brazil, Mexico, and South Africa in their annual meetings on climate change, the *Gleneagles Dialogue on Climate Change*. In recognition of the growing stature of these developing nations, it was announced at the G8+ meeting in Pittsburgh in September 2009 that the G20[116] would replace the G8 as the new "permanent council for international economic cooperation"[117]. While this is notably more inclusive of large and rapidly developing nations, it may not appease critics in many developing nations who see a bias in negotiations premised on minimizing costs to the developed countries as opposed to minimizing the risks of climate change to developing and underdeveloped states. There remains a growing resistance by developing nations to allow developed nations to buy their way out of emissions through Clean Development Mechanisms (CDM), such as reforestation, in less developed nations. This is sometimes seen as a way to let wealthier nations continue their unsustainable, high–emission lifestyle while keeping

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[115] http://unfccc.int/essential_background/convention/background/items/1350.php

[116] The member nation–states of the G–20 make up "90 per cent of global gross national product, 80 per cent of world trade (including EU intra–trade), as well as two–thirds of the world's population" (www.g20.org/about_what_is_g20.aspx) and include Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, United Kingdom, the United States of America, and the European Union. The G–8 will continue to meet about security issues.

[117] www.cnn.com/2009/US/09/24/us.g.twenty.summit/index.html

less wealthy nations less developed, and therefore, poorer.

China, and to a lesser extent, India, has publicly fought the idea that they are somehow equally responsible for future emissions reductions, based on four main arguments:

I. Historic responsibility of western nations — based on unsustainable consumption patterns and lack of leadership in the past
II. Right to economic expansion — often invoking a North–South argument that western nations want to deny economic development to less developed nations
III. Fair measurement — based on per cap emissions versus the total emissions of a country, which calculate more favorably for the larger populations of China and India
IV. Greater vulnerability of its own citizens to the effects of climate change

In addition, China has argued that emissions related to their net export of goods are significant – around 23 percent (Wang & Watson 2007: 4) – and should be assigned to the importer and user of these goods, which are largely western nations. At the same time, though, they have resisted any form of carbon import tariffs. India has been somewhat less vocal. However, they do insist that they have the right to grow and see the delays by Annex I nations in implementing their emissions cuts as "free riding, (which) cost(s) India and other developing countries opportunities to develop in the future" (Parikh & Parikh 2002).

China and India rely heavily on domestic supplies of emission–heavy coal for energy (World Coal Institute 2010), which gives them a greater energy security than oil–dependent western nations. Their understandable reticence to give up this security plays out in repeated calls for technical and financial help to transition to "clean coal". They see it as a *quid pro quo*: they are "prepared to undertake wide–reaching climate protection activities *if* the corresponding finance and technology cooperation is implemented" (Bals 2009).

The nations outside of the West and Asia responsible for disproportionately high total or per capita emissions – such as Iran, Kuwait, Qatar, Saudi Ara-

bia, the United Arab Emirates, Bahrain, Brunei, Indonesia[118], and the Ukraine – are major exporters of fossil fuels, e.g., oil and/or natural gas. These countries rely upon the discourse of historic responsibility of western nations, as well as linking themselves to those countries most directly threatened by climate change to gain technology transfers needed to adapt to a post–fossil fuel world. Some see this linkage as unconscionable. For example, in its summary of the UNFCCC COP in Poznan, Germanwatch (Pals 2009: 14) admonished them for "tak(ing) the LDCs and small island states, whose very existence is at stake, hostage by inflexibly linking adaptation to climate change with the questionable demand for aid in adapting to the consequences of climate protection policies". At the same time, these energy–rich nations continue to argue for financial investment into technologies, e.g., carbon capture and storage, which will continue the use of the fossil fuels they frame as inevitable (Barkindo 2006).

While the many Low Emitting Nations vary dramatically in geography, economy, politics, and culture – and therefore worldviews – they have coalesced on occasion under the *Group of 77* as an umbrella negotiating body. IPCC Contributor Adil Najam (2005) demonstrates how the G77 questioned the *global governance* status quo assumptions of the G7 to have effectively incorporated the concept of *sustainable development* into the debate on climate change. The G77 – G7 debates have shifted over the past decade as the economies of some members, such as Brazil, India, and China, have become powerful negotiating bodies – and significant GHG emitters – in their own rights. Many of the low emitting nations no longer see these G77 members as representing similar interests. Their inclusion in the G–20 will likely lead to their exclusion as representatives of the G77.

Within the least developed countries (LDC), "AIDS and other infectious diseases" and the "growing gap between rich and poor" still loom as larger global threats than the environment (Pew Research Center 2007a). However, the small island and low–lying countries of the Alliance of Small Island States (AOSIS) are already struggling with the effects of climate change. Although nearly half of all Bangladeshis live below poverty level (Bangladesh Bureau of Statistics & United Nations World Food Program 2004), 85 percent of its citizens see climate change as a "very serious problem" (Pew Research Center 2007a: 37).

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[118] Indonesia's emissions, as are those of Brazil, are aggravated by intensive deforestation.

Germanwatch (Pals 2009) argues that the old G7–G77 negotiating positions are outdated and inappropriate. There is too much diversity of interests and vulnerabilities within the G77 and the members of the G7 tend to hide under each other's covers. Instead, they advocate for the creation of a *green group* of countries, "in which a few industrialized countries (e.g. Norway, the EU, Switzerland), a few emerging economies (Mexico, South Africa, Korea, China), and representatives of the small island states and LDCs cooperate" (p. 19) to break the old negotiating deadlock.

Throughout these negotiations, though, the discourse among the western nations most responsible for anthropogenic climate change have largely revolved around the economic impact of climate change mitigation, mitigation for national interests of energy independence and environmental safety, and aid to developing nations to adapt to the results. The first two, arguably self–serving, discourses have dominated the progress in policy development, ensuring that solutions for climate change are framed within the boundaries of western political – i.e., economic – feasibility. Despite the broad scientific and mainstream consensus on climate change, these economic boundaries give us the illusion that we can choose whether and when we want to address it. According to Friends of the Earth (Spratt & Sutton 2007: 30):

> "a central preoccupation with 'not damaging the economy' has resulted in denial, delay and largely symbolic policies such that emissions have increased more rapidly than in most developed economies… The effect of a laudable incremental policy such as mandatory renewable energy targets, even when accompanied by improved energy intensity of production, has been overtaken by the impacts of population and productivity growth so that the net result has been rising, not falling, greenhouse gas emissions. Policies have not been constructed within a framework of fully solving the problem."

1. Environmental or Ecological Citizenship?

The third discourse of aid implies a kind of munificence, whereby generous wealthy nations donate some of their hard earned money to less fortunate nations. This charity approach reflects the individualistic western view of benevolent tithing, described in the Introduction, in which assistance is given to less fortunate peoples, not out of compulsion or responsibility, but purely out of the goodness of heart. Framing adaptation funding as blame-

less charity is flawed in the face of solid documentation, which places historical responsibility for the anthropogenic acceleration of climate change on wealthy western 'donor' countries in the first place (Baumert et al. 2005: 133, United Nations Framework Convention on Climate Change 1992).

The universal moral argument seeks to circumvent the whole notion of historic responsibility. In the film, *An Inconvenient Truth*, Al Gore (2006) forcefully argued that all citizens of a global world share a common humanity. The problem with this kind of universal moral argument is the underlying assumption that all humans maintain an equal obligation to each other. Yet, Shiva sees this kind of globalization of the problem of climate change as one more move by a parochial North to spread its own responsibility to poorer nations (Hajer 1996). Dobson (2004: 17) calls this *asymmetrical globalization*, whereby the western nations, which individually profited from the industrialization which created from the climate change crisis, seek to globalize paying for its resolution. This argument has also lead to *quid pro quo* arguments from the West for mutual obligation from other nations, exemplified by Todd Stern, the special envoy for climate change of the U.S. State Department, when he said: "(we) are keenly aware that the United States, as the largest historic emitter of greenhouse gases, and China, as the largest emitter going forward, need to develop a strong, constructive *partnership* to build the kind of clean–energy economies that will allow us to put the brakes on global climate change" (Wong & Revkin 2009, *my emphasis*). The Chinese delegate responded: "It's difficult for China to take quantified emission reduction quotas… because this country is still at an early stage of development. Europe started its industrialization several hundred years ago, but for China, it has only been dozens of years". One could easily argue that unless China, as the largest future GHG emitter, makes a commitment to reduce emissions, efforts of smaller nations would be pointless. However, the argument is not about whether China will take the steps, but who will pay for them. Considering that emissions cuts will be made from now into the future, it is arguable that China's total emissions will never reach that of the U.S.

In contrast, Dobson (2004) distinguishes between environmental citizenship — the universal duty of all humankind — and *ecological citizenship* – a non–reciprocal responsibility based on the total historical ecological footprint of each nation. Proponents of *contraction and convergence*[119] argue that, as the

[119] www.gci.org.uk

world is forced to contract its total use of fossil fuels, the West should have to contract more in order to converge at a common global per cap emission rate. Müller et al. (2007) use the term *deliberative justice* (Müller 2002 a, b) when discussing this type of differentiated historic responsibility, a responsibility even backed in some western policy making circles (Stern 2007). Beyond simply requiring historical emitters to fund their historical damage, Dobson (2004) argues that the *ecological citizenship* or *deliberative justice* approach shifts the discourse about the nature of these payments away from the current benevolent environmental citizenship frame of "aid, assistance, donors, and subsidies" from the North to the South to an obligation frame under which the North must compensate the South for their disproportional use of natural resources and damage to the environment.

2. False Choice: Economic or Environmental Health

Underlying the focus of the West on the economic impact of climate change mitigation, the universal versus differentiated responsibilities discourse, and charges of *eco–imperialism* (Driessen 2003), which force the least responsible for climate change to bear the burden of mitigating climate change, is the false choice, posed between economic and environmental health.

In an attempt to dispel the false choice between economic health and environmental sustainability, the California Green Innovation Index (Next 10 2007: 3) stated: "As a result of the first wave of green innovation which began in the 1970s,…California is more energy efficient and emits fewer greenhouse gas emissions per person than the rest of the United States, Germany, the United Kingdom or Japan. California's economy has grown (20 percent) as a result of this first wave of green innovation." In addition, its "ratio of GHG emissions, of which carbon emissions account for roughly 72%, to GDP" has dropped from 0.45 in 1990 to 0.35 in 2004. One chart shows that "the growing separation (between carbon emissions cap and inflation adjusted GDP/cap) illustrates the declining dependence of California's economic growth on environmental degradation" (p. 18).

According to the Audubon Society[120]: "the U.S. could eliminate 100 percent of its Persian Gulf oil imports simply by raising fuel economy standards using technology that is available today." However, this pits more carbon efficient automobile manufacturers from abroad against the U.S.'s own homegrown makers (Crawley 2007), much in the same way more domestically–

[120] www.audubon.org/globalWarming/quiz8

abundant clean coal is being pitted against more carbon efficient natural gas, which must be largely sourced abroad[121]. Two years ago, McKinsey & Co. (2007) outlined how the U.S. could eliminate 28 percent of its GHGs with "tested approaches and high–potential emerging technologies" (p. ix). They emphasized, however, that, while the total economic affect would be minimal, the efforts must be centrally coordinated because certain sectors will be affected more than others. These sectors, of course, are private organizations, which will fight for their own financial interests.

McDonough and Braungart (2002) have successfully argued that the long–term return on investment (ROI) is only truly reflected in "cradle to grave" costing, wherein ALL costs, e.g., increased health care costs from a polluted environment, total operating costs, etc. must be taken into account. In this model, buildings and developments are viewed more like whole living organisms which have their own internal energy, cooling, heating, feeding, waste, and social network systems. Construction should adhere to the best uses of the natural light, thermal, and topographical flows which effectively match the environment. Good design protects and promotes nutrient–rich soil, produces its own food, provides wildlife habitat, uses low–productivity land, and favors low–energy and non–polluting transport, urban agriculture, mixed building types, and eternally–preserved open spaces[122]. Furthermore, the Sustainable Building Task Force claims that:

> "minimal increases in upfront costs of about 2% (U.S.$3–5 per square foot) to support green design would, on average, result in lifecycle savings of 20% of total construction costs — more than ten times the initial investment. Generally, the earlier green construction gets incorporated into the design process, the lower the cost. Even small changes in productivity and health translate into large financial benefits, such as reduced capital and operating costs, valuation premiums and enhanced absorption rates, potential streamlined approvals, reduced liability risk, health and productivity gains, marketing benefits, and new business opportunities (Kats et al. 2003: ii)."

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[121] Hansen (2009) argues that, because oil and gas have peaked, coal is now the real problem.

[122] In addition, clean air and materials create clean air, avoid thermal pollution, and purify indoor air. Good design uses natural ventilation and moderates the building's microclimate(s). By obtaining water locally, storing and using rainwater, creating pure water and percolation, and using gray–water, the development can ensure that the effects of its operation will only be positive to surrounding communities, while saving itself money.

Yet, today, buildings consume nearly a third of America's energy—much of it wasted by inefficient design.

Industrializing countries, such as China, India, and Brazil, often argue restrictions on carbon reduction will inhibit their economic growth. However, cellular phone development in Eastern Europe (Vaknin 2006), Asia, and Africa (James 2008) demonstrates that these nations were able to more quickly implement highly advanced telecommunication systems than western nations because they had no old–fashioned land line technology to integrate. When they finally got telephones, they went straight to wireless. This kind of *leapfrogging of the technology adoption curve* could benefit any industrializing nation (Nature 2004).

Yet, not only are economic health and environmental sustainability not mutually exclusive, each depends upon the other. This connection was first made public in the Bruntland Report (United Nations General Assembly 1987). Through detailed examples of the dramatic human effects from environmental degradation, it argued that environmental care should be a higher priority than economic development for overall human security:

> "When, therefore, we optimistically declare that economic development and environmental maintenance can go along hand in hand, this qualifier must immediately be added: only if the maintenance of the ecosphere is made the first priority. Economic development must be secondary, guided by strict ecological standards" (p. 289)

The success or failure of worldwide cooperation on climate change policy must be made within a larger discussion of sustainable growth (IPCC 2001), while "connecting the dots" between the economy, environment, social welfare, security, and energy. The Climate Code Red Report published in 2007 by another global environmental advocate, Friends of the Earth International (FOEI), asserts true climate change policy will not be possible unless dramatic economic development or poverty alleviation policy is included (Spratt & Sutton 2007). The report goes on to state: "We should not focus on climate change as a single issue. If we ignore the multiplicity of issues that could undermine life and wellbeing we may, if we are lucky, solve the climate crisis only to find that we have in the meantime crashed the life support systems of humans and other species in a multitude of other ways" (p. 55).

As the Declaration of the United Nations Conference on Environment and Development in Rio stated back in 1992 (United Nations Environmental Programme 1992): "Peace, development, and environmental protection are interdependent and indivisible." "No substantial famine has ever occurred in any independent and democratic country with a relatively free press" (Sen 1999: 7-8). The Green Jobs[123] Initiative of the UN Environmental Programme, the International Labor Organization, the International Organisation of Employers, and the International Trade Union Confederation recognizes the opportunities of tackling both issues. Its twin goals are to simultaneously:

I. "avert dangerous and potentially unmanageable climate change and protecting the natural environment which supports life on earth

II. provide decent work and thus the prospect of well–being and dignity for all in the face of rapid population growth worldwide and the current exclusion of over a billion people from economic and social development" (United Nations Environmental Programme 2008b)

In addition, the UN Environmental Programme (2008a) responded to the "triple crises of food, fuel and finance" with an initiative called the *Global Green New Deal* (United Nations News Centre 2008). This initiative argues for "the enormous economic, social and environmental benefits likely to arise from combating climate change and re–investing in natural infrastructure — benefits ranging from new green jobs in clean tech and clean energy businesses up to sustainable agriculture and conservation–based enterprises." The goals of this initiative echo the goals of the 2009 economic stimulus plans of many western nations, including the United States (Obama for America 2007, 2008), to simultaneously address the weak financial market, high unemployment, and looming recession, along with energy insecurity driven by non–domestic sources and unstable pricing, and the threat of climate change. A joint report by the United Nations' Conference on Trade and Development and its Environmental Programme (2008) concluded that organic farming addresses crises in food and the environment simultaneously.

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[123] Defined as "work in agriculture, industry, services and administration that contributes to preserving or restoring the quality of the environment" (United Nations Environmental Programme 2008b)

Within the United States itself, this false choice has pitted the environmental and labor rights movements against each other, i.e., trees versus jobs. Eventually, the labor and environmental movements came to realize that they had much in common and could further both of their causes by collaborating against the real "other" – the corporate owners who had pitted them against each other in the first place. During the World Trade Organization protests in Seattle in 1999, these "Turtles and Teamsters" joined forces (Obach 2004)[124], as they came to realize that the solutions for environmental problems and social injustice are often the same and even closely intertwined (Charnovitz 1994, Gonazalez 2000–2001).

C. Cultural Construction of the Deep Frames of the West

As Edelman (1985: 10) once explained that: "it is language about political events…that people experience, (not the events themselves, and)…the critical element in political maneuver for advantage is the creation of meaning…that legitimize(s) favored courses of action." Western "discourses (have) shape(d) what can and cannot be thought, delimit the range of policy options and thereby serve as precursors to policy outcomes" (Hajer & Versteeg 2005: 178). The western construction of climate change in the West described in this chapter reflects the dominant western worldview, which incorporates the western ideas of ownership, personhood, growth, standardization, centralized decision making, justice, happiness, and *species exceptionalism* discussed in Chapter Two. Discoursively, three *deep frames*, those deepest moral convictions and political principles which structure a worldview (Lakoff 2006a, 2006b: 12), have shaped the scientific and social (discoursive) construction of anthropogenic climate change in the West to its own discoursive advantage. Two of these – Humankind as Steward and Nature as Controllable – will be discussed in more detail below. The third deep frame, which evolved out of these two – One World Market – will be discussed in Chapter Four.

1. Humankind as Steward

Throughout the discourse in western Christian communities, the idea that humankind is a kind of steward of Earth holds significant sway. It marries the notion of species exceptionalism of humankind as a special being cho-

[124] Schaffner (2008) offers another example of false choices. The on–going legal battle between the U.S. Navy and environmental groups over the Navy's use of sonar radar in their submarines, which has been proven damaging to whales, is posed as a choice between national security and the environment.

sen by God with a call to do something about the realities of environmental damage here on Earth. While this idea of stewardship has been alternately interpreted as one of Franciscan care and that of Lockean exploitation and ownership, it retains humankind's special place and keeps with a literal reading of the Bible, while holding onto the notion that humankind is separate from and superior to nature. This kind of benevolent mastery allows humankind to decide the fate of nature…in sharp contrast to the more indigenous view of humankind as an inextricable part of an unpredictable nature.

Over the past two decades, Christian leaders have been inconsistent in their calls for environmental leadership, ranging from early advocates to continuing skeptics. Starting in the early 1990s, a growing number of Christian leaders across the world began to see the mitigation of anthropogenic climate change and broader environmental care as an issue of religious stewardship and called on their own organizations to respond[125] (Pope John Paul II 1990, United States Conference of Catholic Bishops 2001). The basis for this call was in reference to Genesis (Bible, 2: 15, NIW 2010), when God reveals the Garden of Eden to Adam and instructs him to "cultivate and keep it" and the blunt words of Revelations, (Bible, 11: 18, NIW 2010) "God will destroy those who destroy the earth." These church leaders argued that God created man in part as stewards of Earth, making it our duty to protect it (Rosenthal 2007). In 1990 the former Catholic Pope, John Paul II, proclaimed: "We cannot interfere in one area of the ecosystem without paying due attention both to the consequences of such interference in other areas and to the well being of future generations." In response to the Third IPCC Report in 2001, the U.S. Conference of Catholic Bishops (2001: 3) sent a letter to their own congressional leaders stating:

> "Global climate change is by its very nature part of the planetary commons. The earth's atmosphere encompasses all people, creatures, and habitats. The melting of ice sheets and glaciers, the destruction of rain forests, and the pollution of water in one place can have environmental impacts elsewhere. Responses to global climate change should reflect our interdependence and common responsibility for the future of our planet. Individual nations must measure their own self–interest against the greater common good and contribute equitably to global solutions."

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[125] www.baptistcreationcare.org

However, Evangelical Protestant leaders, which represent over a third of American adults (Kosmin & Keysar 2009), have struggled to reconcile their monotheistic responsibility to worship one god with the fear that environmental stewardship would be seen as a form of worship of Earth itself. The debate on climate change was overshadowed by a perception of hostility and disparagement of religion by scientists (Sleeth 2006). Environmental issues were associated with the same evil liberals who promoted abortion, same–sex marriage, free love, and drugs (Moyers 2006)[126]. Skeptics, such as Reverend Jan Markell and the Cornwall Alliance[127], argued that, since the evidence was still inconclusive, Christians must not get lulled into a slippery slope of cooperation with "liberal environmentalists" (Beisner et al. 2006). Joining the environmental movement became a false choice between "standing–by–my–church–and–bible" and "protecting–my–earth".

As scientific evidence grew about the existence and causes of climate change, the issue provided an opportunity for many Evangelical leaders to reevaluate the Christian position on environmental responsibility. These leaders included major environmental convert Pat Robertson, Rev. Richard Cizik, and the Evangelical Climate Initiative. As an alternative to the term "environmentalist," many Christians refer to themselves as advocates of "creation care"[128] and see climate change in terms of justice (Carmichael 2007). The National Council of Churches (NCC) Eco-Justice Programs (2007) further state: "As an expression of fundamental human values, there is a religious, moral, scientific, and an historic national consensus on the abiding priority of environmental stewardship." The *Eco–Justice Program God's Mandate: Care For Creation* was created by the NCC to work toward mitigating climate change effects on those it sees as powerless victims, e.g., the poor, the natural world, and future generations. The Earth has become the latest victim of oppression in need of Christian liberation. However, it re-

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[126] The alignment of Evangelical Christians and conservative politicians extended to other issues, which were counter to their beliefs as well, such as the invasion of Iraq. Despite worldwide condemnation, as well as condemnation among all non–evangelical Christian leaders, 87 percent of white evangelicals in the U.S. supported the war in the early days of the invasion (Marsh 2007).

[127] Two major supporters of the Cornwall Alliance (formerly known as the Interfaith Stewardship Alliance), the Heritage Foundation and the Competitive Enterprise Institute, have received more than $500K and $2 million, respectively, from the Exxon Foundation in the last eight years. (Greenpeace 2007a, 2007b, Mohin 2006). Exxon spent a total of US$8.9M from 2005 to 2008.

[128] www.creationcare.org

mains important for some to insist that their motivations are purely theological. When one of the groups most reticent to climate change wrote a strong declaration to its constituents, the Southern Baptist Environment and Climate Initiative (2008) emphasized:

> "our motivation for facing failures to exercise proper stewardship is not primarily political, social or economic—it is primarily biblical."

To engage Christian Evangelicals, environmentalists have begun to emphasize the humility and lack of materialism of Christ, such as that found in the "What would Jesus Drive?" campaign[129]. Climate change skeptics are now in the minority among Evangelical Christian leaders[130], although skepticism persists – to a larger degree than other Christian denominations – among Evangelical Christians themselves (Leiserowitz et al. 2009). At a national level, environmental stewardship has also cut across many religions in the United States (Pew Forum 2004: 1–2):

> "In contrast to abortion and other hot–button cultural issues, which divide most religious groups in the United States, there is fairly strong consensus across faith traditions on environmental policy… By a two–to–one margin (fifty–five to twenty seven percent) respondents back strong regulations to protect the environment. Furthermore, the level of support is quite deep… Respondents in this survey were asked whether they favored stronger environmental regulations 'even if they cost jobs or result in higher prices'…(in ranking) priorities for religious voters, environment (fifty–three percent) ranks higher than abortion (forty–six percent) or gay marriage (thirty–three percent)."

While there is a growing movement for broader cooperation, most inter–faith associations (A list of *Some Interfaith Organizations Cooperating on Environmental Issues* can be found in Appendix D) are organized strictly on "universal issues — political violence, arms race, poverty, illiteracy, pollution, pandemics, etc, — which must now be taught, learnt, discussed and

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[129] www.whatwouldjesusdrive.org

[130] One subgroup, identifying itself as *End Time Christians* (Scherer 2004), sees the destruction of Earth as part of God's plan for the second coming of Christ. They based their views on a specific interpretation of the Christian Bible's hotly debated *Book of Revelations*. This viewpoint was best reflected in the *Left Behind* Book Series, which sold over 62 million copies worldwide (Memmott 2005).

shared by every citizen of the world" (Benkirane 2002)[131]. As anthropogenic environmental destruction has reached public awareness, environmental stewardship clearly has become one of those issues around which these religious groups have found common ground.

2. Nature as Controllable

While western religious and scientific leaders have battled over ideas of truth and right for the last 500 years, they do share one critical belief: that humankind is separate from and superior to nature. This separation was further widened by the technological advancements of industrialization into the belief that humankind could actually control – or conquer (White 1967) – nature. "Industrial society was based on 'to measure is to know, to know is to predict, to predict is to control'" (van Ginneken 2003: 184). This thinking is illustrated by the use of war terminology in the middle of the 20th century by the U.S. Army Corps of Engineers to describe how they "victoriously harnessed, straightened, regularized and shackled" (McPhee's 1989: 26, *paraphrased*) the powerful Mississippi River:

> "This nation has a large and powerful adversary. Our opponent could cause the United States to lose nearly all her seaborne commerce, to lose her standing as first among trading nations…we are fighting Mother Nature…It's a battle we have to fight day by day, year by year; the health of our economy depends on victory" (p. 7, my emphases)[132].

Extreme natural events in recent years, such as the Asian tsunami, Hurricane Katrina, the volcanic eruption in Iceland, and the massive flooding along the Mississippi River, as a result of breeching 20 levees built by the U.S. Army Corps of Engineers (CNN 2008), have vividly illustrated that western science and technology cannot control the natural world. However, as Hajer (1996: 255) has noted: "(in) the prevailing institutional frame-

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[131] Paganism is by its nature tolerant of other gods and pantheist faiths tend to hold that "different beliefs…(come) from the same source" (Kung 2000). Therefore, the only truly theological debates on religious validity rest primarily between the monotheistic religions.

[132] Some films in the mid–20th century focused on the archetype of Engineer–as–Hero to bring "prosperity to the locals by building a dam, digging a canal, drilling for oil, etc., while battling irrational fears of economic and ecological devastation" (Gerringer 2006: 19). In contrast, the second *Lord of the Rings* film in the early 21st century depicted "evil" as a massive, forest–destroying, twisted–science industry, while the "good guys" enlist the help of nature, represented by the tree–like Ents.

work… engineers develop only those technologies that enhance control over nature and society rather than achieve ecological effects while making society more humane." Starting from the goal of controlling nature pre–conditions the set of solutions which are considered (Edelman 1985, Hajer 1996, Hajer & Versteeg 2005).

In a clear reflection of the idea that nature is controllable, much mainstream discourse today focuses on the search for a scientific silver bullet, which will magically eliminate the need for a substantial change to the western lifestyle, e.g., injecting carbon into the soils, rocks, and ocean (carbon capture and storage or CCS), seeding the ocean with iron to make more plankton, harnessing atmospheric wind, and terra-forming Mars[133]. Sadly, many of these prospective silver bullets would split society even further from nature. To Edelman's quintessential example of value inversion, "to wage war is to foster peace" (1985: 17), we could add, "to split atoms is to protect the planet" and "to genetically modify organisms is to preserve food security." The former speaks to the increasing advocacy for resurgence in nuclear power, despite substantial evidence against its claims of safety and profitability, as well as fears of the police state–like security needed to protect it (Doyle 2007a); the latter speaks to the on–going debate about genetically modified organisms (GMO). Both technologies involve corruptions of nature, e.g., nuclear's artificial, scientific splitting of nature's most basic atomic component and GMO's genetic manipulation of a plant's ability to reproduce (Federal Ethics Committee on Non–Human Biotechnology 2008). Pacala and Socolow (2004) claim that current technologies could "solve" climate change – if only implemented more intensively – without any reduction in energy–using behavior. However, as of this writing (2015), no one solution has singlehandedly "solved" climate change. Given the complexity of the problem, it is unlikely one single technical solution will ever be enough. As Hulme (2009: 334, 336) argues, "wicked problems, such as climate change,… are beyond the reach of mere technical knowledge."

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[133] The latter option was emphatically argued to me a few years ago by the Associate Director for Space Development and Commerce at NASA's Johnson Space Center in Houston, Texas. Craig (1989) had managed the Office of Lunar and Mars Exploration and created the "Scenario For Human Exploration of the Moon and Mars", which formed the basis for space exploration on Mars during the presidential administration of George Herbert Bush. Craig earnestly believed that Earth was like to be destroyed by nuclear weapons and/or environmental degradation and the survival of our children would come from cultivating life on Mars.

a. Scientific Objectivity

Western science relies on the idea of objectivity, the very idea of which Latour and Woolgar (1979: 176) disputed: "Objects of scientific study are socially constructed within the laboratory — they cannot be attributed with an existence outside of the instruments that measure them and the minds that interpret them". While the scientific community sees its research and findings as objective outcomes of approved methodologies and peer–reviewed publications, the idea of total objectivity is questionable and consensus on every point does not exist. Scientific analysis of nature is a social construction (Bird 1987). As Birrar (1994: 4) points out: "what is considered valid scientific knowledge at a certain moment bears the mark of values and beliefs in society in general, of the motives and strategies of individuals, and of the organization of the social processes involved."

A peer review of nearly 1,000 scientific articles published between 1993 and 2003 found a strong consensus among scientists on anthropogenic climate change and no evidence of significant climate change skepticism (Oreskes 2004). The review concluded: "without substantial disagreement, scientists find human activities are heating Earth's surface (p. 1686)." Yet, skeptics of anthropogenic climate change remain and, during the same period, a survey of mass media reported a lack of scientific consensus in 53 percent of mainstream news stories (Gore 2006). The disparity of the level of skepticism and consensus can be seen on two levels: nuanced disagreement within the scientific community on the scope and timing of climatic change and a deliberate campaign of misinformation to portray a significant lack of consensus by vested economic interests.

While it is true that the vast majority of the scientific community agrees that "human activities are heating Earth's surface", there is real debate on many of the details of climate change and the time period in which humankind has to address them[134]. This is logical. There is always a measure of uncertainty in any scientific prediction. Climate models contain assumptions and scientists themselves are human beings capable of human error. The peer review system in western science attempts to eliminate as much of this as possible. Yet, it is the never–ending task of science to seek weaknesses in current knowledge, hypothesize, and test possible explanations, and then contribute these findings to further enhance the body of knowledge – which

[134] Differing opinions on the causes of an apparent standstill in global warming provide one example: www.spiegel.de/international/world/0,1518,662092,00.html

Popper (1963) called *falsification*.

Unfortunately, instead of fostering additional inquiry and actively challenging consensus positions to find weaknesses, which can be further investigated and strengthened, dissent tends to be ridiculed (Campanario & Martin 2004). While much of the media hype around climate change skeptics is driven by deliberate campaigns of misinformation by vested interests (Newell 2005/6), which will be discussed in Chapter Four, even amongst climate scientists, there is notable pressure to publish results in a light consistent to prior findings, instead of that which may challenge them. Kuhn (1970: 5) called this pressure a paradigm of assumptions and standard practices for undertaking research, which "force nature into (predetermined) conceptual boxes". Ereaut and Segnit (2007: 27) call this linguistic repertoire (or frame) "the suppression of debate." Birrar (1994: 8) refers to this as the "temptation of social determinism…to use knowledge for its own benefit… This need not be a calculated strategy. Actors are often not aware of temptations and the fact that they are giving in to them." Bird (1987) summarizes much of the work on the social construction of science with:

> "Scientific paradigms are socio–historical constructs — not given by the character of nature, but created out of social experience, cultural values, and political–economic structures…the actual objects of inquiry, the formulation of questions and definitions, and the mythic structures of scientific theories are social constructs. Every aspect of scientific theory and practice expresses sociopolitical interests, cultural themes, and metaphors, personal interactions, and professional negotiations for the power to name the world (p. 256)."

Cox (2010: 65) calls this claim to scientific consensus a way of drawing "symbolic legitimacy boundaries", which establishes a "presumption of normalcy" for the consensus claim. If their claim to legitimacy – which Cox claims results from a "rhetorical struggle that makes up public debate…in our modern public sphere" – is successful, dissenting views will be marginalized as unreasonable, i.e., outside the legitimate boundaries of what is deemed acceptable.

Research into temperature trends in Antarctica provides one vivid illustration of this push for consensus (Chang 2009). Prior studies showing that areas of Antarctica were cooling, as opposed to the warming predicted by climate change models, are often cited by climate change skeptics. Two sci-

entists reanalyzed the data, using additional sources, and found a way to prove that Antarctica, as a whole, is warming. The two lead authors agree that their findings are "in accord with what models predict as a response to greenhouse gases." However, even when the lead scientist, Eric Steig, admits that "because the climate record is still short, more work needs to be done to determine how much of the warming results from natural climate swings and how much from the warming effects of carbon dioxide released by the burning of fossil fuels," one of his co–authors, Drew Shindell, disputes this doubt by saying "It's extremely difficult to think of any physical way that you could have increasing greenhouse gases not lead to warming at the Antarctic continent." Furthermore, another scientist not related to the research, Michael Oppenheimer, is quoted as saying: "Obviously the situation is complex, resulting from a combination of man–made factors and natural variability, (b)ut the idea of a long–term cooling is pretty clearly debunked." Even the scientist who originally published the research showing the cooling trend, Andrew Monaghan, seems relieved when he says: "The new study spurred me to take another look at ours — I've since gone back and included additional records, (and) the results I get are very similar to (Steig)." The tone of the statements raises the question as to whether the scientists were truly looking for an objective answer as to whether Antarctica is cooling or warming or whether they were looking for a way to fit the Antarctica outlier into pre–established climate change models.

A second illustrative example came in November of 2009, when several emails were stolen from a leading scientific center on climate change[135]. Some of the content (The Telegraph 2009b) was seen by climate change skeptics as proof that research findings contradictory to the consensus on climate change had been deliberately hidden. The scientists involved responded with indignant denial: "It is *ludicrous* to suggest that it refers to anything untoward (The Telegraph 2009a)". The department heads responded in kind with: "I'm *appalled* at the very selective use of the emails, and the fact they've been *taken out of context*," and the scientific objectivity frame: "We are *utterly confident* that there was no collusion or manipulation. All the data used was peer reviewed and we are *certain* it is *fully reliable* (Climatic Research Unit 2009a, *my emphasis*)". As the crisis spread, the lead scientist involved acceded that: "some of the published emails do not read well. I regret any upset or confusion caused as a result. Some were clearly written in the heat of the moment, others use colloquialisms frequently used

[135] The Climatic Research Unit (CRU) of the University of East Anglia.

between close colleagues.", Yet, reiterated that "we are, and have always been, scrupulous in ensuring that our science publications are robust and honest." He ultimately stepped aside, and two separate independent inquiries were commissioned (Climate Research Unit 2009b, 2010). Scientists around the world wrote letters in support of climate science and the consensus that human activity is causing greater than normal climate changes. Many of those, including one from a large number of Dutch scientists to the Dutch Parliament, parroted the scientific objectivity frame[136]. Unfortunately, this notion of "trust us" is not entirely comforting in a time when the financial sector and the Catholic Church are also arguing that they are self–regulating systems outside of mainstream consequence. Ultimately, the two inquiries into *Climategate* exonerated the scientists and their work but made recommendation for greater transparency and better statistical analysis.

This kind of greater transparency includes calls for public access to raw data, as well as conclusions. Some scientists, including one climatologist who had her own results corrected by an amateur blogger, argues that ignoring or antagonizing skeptics is backfiring on climate science (Guterl 2010). In addition, there is the important aspect of humility, which is contained in the Dutch response: "The writing of IPCC reports and the quality controls therein remain the work of people. A guarantee of a faultless report is an unreachable ideal, no matter how desirable it is. It is essential to continually evaluate the procedures to sharpen them as needed, through the lessons learned from the apparent mistakes"[137]. Although this section is somewhat hidden underneath all the scientific objectivity framing, it is this kind of admission of human fallibility in science, which will ironically go a long way towards regaining public trust in climate science. For the stronger the scientific community defensively argues for its objectivity, consensus, and trustworthiness, the more subjective and partisan it appears.

Given the centuries of religious persecution and politicization that scientists have withstood, this defensive reaction, that dissenters are trying to undermine science as a whole, is understandable. Yet today, western science itself can be considered an alternative faith (Martin & Nakayama 2003: 46–7), giv-

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[136] www.sense.nl/uploads?&func=download&fileId=995

[137] "Wij concluderen dat de IPCC procedures transparant en grondig zijn, ook al zijn zij niet feilloos. Het schrijven van IPCC rapporten en de kwaliteitsbewaking daarvan blijft immers mensenwerk. Een garantie op een foutvrij rapport is een onhaalbaar ideaal, hoezeer dat ook gewenst is. Wel is het essentieel de procedure steeds weer te evalueren en waar nodig aan te scherpen, door lessen te trekken uit de gebleken fouten."

en the frequent need of its "believers" to discredit alternative (spiritual) worldviews and the false choice it often poses between faith and reason, as if the two are mutually exclusive. The belief that scientific discovery can bring understanding and order to the natural world without religion mirrors the fundamental idea of mutual exclusion found in monotheistic faiths. As Latour and Woolgar (1979) have said: "Scientific activity is a system of beliefs, oral traditions and culturally specific practices— in short, science is reconstructed not as a procedure or as a set of principles but as a culture." A better recognition of the differentiated, yet complementary, roles of science and religion may actually increase the objectivity of scientists, instead of the false choice between the two that dominates discourse today.

b. False Choice: Faith or Science

> "science and religion are potential allies for averting mass extinction" — E.O. Wilson (2006)
>
> "a confrontational model for the relationship between science and theology is out of date." — Hans Küng (2007)

Humankind today largely relies on two primary sources to understand the natural world – religious faith and scientific research. Each serves a distinctly different purpose, but contributes a vital part of our holistic understanding of the world around us (Harrison 2010, Magnin 2006, National Academy of Sciences 1999). From the early Greek natural theologians, who claimed evidence of a divine authority could be found within the natural world, through centuries of scientific sponsorship by the early Christian church, religious, and scientific leaders in the Western world sought to reconcile new discoveries with firmly religious views. While there were periods of tension — such as the oft-cited condemnation of Galileo — "modern science emerged (out of) a Christian context" (Ruse 2010: 229). It was largely the relatively recent release of Darwin's *On the Origin of Species* (1859) and his ideas on the "transmutation of species" that sparked the real split among religious in their relationship to the scientific community. Even though this scientific revelation was not seen as irreconcilable to Christian belief among the liberal Protestant leadership (Stenmark 2010), which dominated the discussion in the United States of the "religious implications of the transmutation hypothesis" (Roberts 2010: 89), more conservative Protestants (as well as conservative Jewish and Muslim leaders) felt "it was not possible to endorse evolutionary theory without abandoning ideas that were of central

importance with the Judeo-Christian tradition" (p. 97). The legacy of the latter resides within the religious leaders in the United States today, who discount any science seen to challenge religious authority as pure conjecture and/or liberal political activism (Harrison 2010). Their tact has largely been to discredit science itself.

By denying the vital distinction between religion based on faith and science based empirical observation, leaders of the *intelligent design* movement (Johnson 1991) have gotten creationism put on the curriculum of science classes around the United States. Religious theologies belong to religious studies courses. Only empirical research, which has been tested by stringent academic standards and peer reviewed, has the privilege of being taught as scientific fact. This politicization and discrediting of science endangers a society's ability to solve problems, heal people, and inspire ground–breaking achievement. Without science, we would not have landed on the moon, developed antibiotics and immunizations, nor mapped human DNA.

At the same time, some scientists[138] argue that science renders religion irrelevant and sees religion itself as an affront to science (Hitchins 2007). Dawkins (Black 2007) simply cannot understand how anyone could attribute natural processes to some abstract spiritual force, given what we have learned through science. Yet, instead of replacing religion and what it has meant to humankind since its evolution, western science has only increased the relevance of religion (Nisbet & Mooney 2007). As Montagu (1988: 118) notes: "Scientists believe in proof without certainty, (but) most people believe in certainty without proof". Natural scientists have reached a consensus that man evolved over millennia from particles, instead of being shaped in seven days by a creator[139]. Yet, the spiritual question posed by theologian, Hans Küng, of the Global Ethic Foundation remains, "Why (was there) something instead of nothing" (Wilson 1978)? Küng (2007) maintains: "Even when we accept evolution as scientists generally describe it, (God) maintains a role…in founding the laws of nature by which life evolved and in facilitating the adventure of creation." Haught (2010) sees the very existence of evolution - the discovery that nature is not static but constantly in flux - and the causal link recently made between the perfect conditions re-

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[138] Taylor (2001b: 235) argues that *scientific paganism* is increasing, yet the academic settings that I have found myself in past four years have been largely disparaging of religion.

[139] Although the National Academy of Sciences (1999: 1) acknowledges that no scientific explanation is final and complete.

quired by our universe to have even allowed the human mind to evolve, as evidence of *cosmic purpose*. "Science…cannot even ask, let alone answer, the question of purpose" (p. 263).

Sleeth (2006) has argued that a more constructive dialogue between these two groups depends upon mutual respect. Western conservative religious and scientific leaders clearly approach the subject of climate change from different motivations and backgrounds, yet they share a common interest in averting this crisis. Addressing climate change will require both scientific data and religious appeal. An appeal to bridge the difference between the scientific and religious communities from the scientific side was published in Science Magazine (Kolmes & Butkus 2007). The authors – a biologist and theologian, respectively – called for greater cooperation between scientists and religious leaders on climate change. "(Religious leaders)…are listening carefully to the science. Scientists ought to be in dialogue with them." Appeals from the religious side can be found in the aforementioned letter from the United States Conference of Catholic Bishops (2001), which declared: "The IPCC has outlined more clearly and compellingly than ever before the case for serious and urgent action to address the potential consequences of climate change, as well as highlighting the dangers and costs of inaction." Perhaps, as respect grows on each side of the faith–reason debate for the purpose of the other, the defensive reflex of some scientists and religious leaders will ebb, and they will feel less inclined to argue for the absolute objectivity and consensus, which only makes it seem more subjective and partisan.

Furthermore, there is a complex inter–relationship between science and religion when it comes to making moral decisions. Dawkins (Black 2007) argues that humankind's moral inclination is a result of evolution, while Haidt and Joseph (2006) and Bushrui (2008) argue that religion is the outcome of humankind's innate sense of morality. Regardless of exactly how moral judgment came to be, however, the interplay can be seen in the moral or religious discussions following major scientific discoveries. Early abortion, for example, was considered a practical matter into the mid 19th century. Life was not considered to begin until a woman experienced *quickening*, that first flutter of life which typically occurs around the fourth month of pregnancy. Along with the later scientific discovery that signs of life were present much earlier, however, moral ideas of life changed. These discoveries triggered an emotive, and even deadly, debate that a century and a half later shows no sign of abating (Hegeman 2009). Other more recent discover-

ies in cloning, stem cell research, and artificial reproduction (Lyerly et al. 2006) have been followed immediately by moral questions. The scientific discovery of anthropogenic causes of climate change have once again focused on moral discussions – not scientific discussions – about how to respond. Now that we know (thanks to science) the potential damage of GHGs, are we not morally obliged to address it?

Instead of lamenting religious interference in science, perhaps it is time to recognize the importance of moral discussions around scientific discoveries, especially given the damage that the technical application of science has wreaked on the world, e.g., nuclear meltdowns, holes in the ozone layer, and the human organ trade. Perhaps it is time to start asking ourselves the moral question: "Just because we can, should we?" and recognize the interrelationship between scientific discovery and moral judgment. Guiderdoni (2006: 172) argues that this kind contemplation will both increase the responsibility that scientists take in how their research is realized through technological application and reconcile the complementary roles of religion and science.

D. Chapter Summary

This chapter's key conceptual insight was the identification of two deep frames – Humankind as Steward and Nature as Controllable – as traced through the development of the scientific and social phenomena of anthropogenic climate change. While they have been discussed herein as two separate ideas, they are, in fact, ideologically and discoursively, closely interrelated. They both rely on the idea that the superiority of humankind's scientific knowledge and/or heavenly purpose – at least in the West – allows us to be able to observe, measure, and control the natural world to our own benefit from a physical and emotional distance. In turn, this confidence and distance has led to treat the natural world as a commodity which can be bought and sold, the notion of which underlies the creation of western economic instruments, such as carbon trading or tax schemes, as critical means to addressing climate change. This commoditization, and the centralization required to ensure its adoption, illustrates the third deep frame of the western worldview – One World Market – which is discussed in Chapter Four. This final chapter of Section Two will conclude our diagnostic work on defining the problem and causes of the dominant frame, the first framing task of a *global interpretive frame transformation* (Snow et al. 1986).

FOUR

Identifying The Überframe: One World Market

> "350 is more than a number—it's a symbol of where we need to head as a planet" – 350.org
>
> "Working for a world free of poverty" – World Bank Tagline
>
> "To attract companies like yours… we have felled mountains, razed jungles, filled swamps, moved rivers, relocated towns…all to make it easier for you and your business to do business here." – 1975 Advertisement by the Philippines Government in Fortune Magazine (Korton 1995: 161)

Throughout this dissertation, we have looked at the historical influences and development of the dominant western worldview and the ways in which the universalization and institutionalization of this worldview have shaped social and environmental policy across the world. The prior chapter identified two key deep frames, *Humankind as Steward* and *Nature as Controllable*, inherent to this worldview. This chapter will look at the *überframe* "One World Market", through an analysis of three global industries, and the ways in which this deep frame constructs climate change. Downs (2002: 47 – 48) describes an *überframe* as an overarching frame which incorporates a number of other cultural frames. While he uses *überframe* and worldview interchangeably, he does distinguish between the two concepts when he notes that *überframes* can be used by people holding different worldviews. I would argue that this usage across worldviews is a result of the *discourse institutionalization* described by Hajer (2006: 70), not a true absorption of the *überframe* into multiple worldviews.

The *überframe* identified through my research, "One World Market," incorporates two main ideas – first, that the world is a kind of single unit which can and should be centrally measured, judged, and administrated, and second, that this unit can and should be serviced like a giant marketplace. The

first idea entwines the deep frames identified earlier, *Humankind as Steward* and *Nature as Controllable*, which themselves incorporate the western ideas of ownership, personhood, growth, standardization, centralized decision making, justice, and happiness and *species exceptionalism* discussed in Chapter Two. The second idea sees this unit as a capitalist free market, where basic necessities are services to be supplied by providers[140]. This chapter looks at each of these ideas in turn.

A. <u>One World Government</u>

In response to the devastation of World War II – and arguably the long sordid list of wars preceding it – several global institutions were created with the express goal of preventing another world war. The core idea behind each institution was to make the world more integrated, more beholden to people outside of their own national borders. These institutions sought to globalize rights and commerce under the notion that common understandings, familiarity, and vested interest would deter nations from waging war upon others. The Universal Declaration of Human Rights (UDHR), which was adopted by the United Nations General Assembly in 1948, redefined and standardized what constituted human rights and shifted the enforcement of those rights from a national, sovereign, cultural relative scale to a global one (Hamelink 1994: 61). Regardless of its good intentions and outcomes, this global scale was an unprecedented intrusion on national sovereignty over the lives of its citizenry. Some nation states and ethnic groups have challenged the universal notion of human rights under cultural relativists' arguments (discussed in Chapter One), but they have largely lost the arguments to the extent that they have been unable to successfully extricate themselves from their enforcement. The International Criminal Court, which commenced in 2002, threatens to prosecute those national leaders who would violate the human rights of their own citizens in the event their own national courts refuse to try them.

At the same time, the Bretton Woods institutions (International Monetary Fund and World Bank) and General Agreement on Tariffs and Trade (GATT, the precursor to the WTO), were created under the notion of that if national economies were more entwined with each other, nations would be less like-

[140] In sharp contrast, Lakoff (2010: 5) distinguishes between the basic necessities the public sector should provide for, such as "adequate food, water, housing, transportation, education, infrastructure, medical care, care for elders, the disabled, environmental protection, food safety, clean air", and the services the private sector offers, which "start where necessities end." He argues that "Necessities should never be subordinated to private profit."

ly to go to war because they would have a direct vested interest in each other's welfare. While the idea of peace through commerce was not new – Montesquieu, Kant, and Paine had been arguing this point for centuries (Doyle 1983) – these new organizations actually institutionalized this co-dependency, setting the stage for the spread of globalization. These organizations were granted broad decision making authority to make rules about how the interaction between economies would work. As the dominant negotiating party, the United States set these rules to its favor, incorporating the dominant western worldview based on ownership, personhood, growth, standardization, centralized decision making, justice, and happiness (discussed in Chapter Two). Specific elements of the Bretton Woods institutions may have changed over time – not the least of which was the unilateral canceling of the Gold Standard by the US in the 1970s. Yet this core idea – that the world is a kind of single unit which can and should be centrally measured, judged, and administrated – has remained largely intact since the 1940s.

This notion of the world as a singular administrative unit underlies some of the base assumptions of the western public sector and academia, which looks to a centralized type of 'global governance'[141] as the key agency to solving public problems. The way in which this *überframe* both defines and limits policy can be found in the very Millennium Development Goals (MDG), which the writers of the annual report see as nothing less than the "the most important promise ever made to the world's most vulnerable people…to build decent, healthier lives for billions of people and creat(e) an environment that contributes to peace and security (United Nations 2010: 5)". Of course, the MDGs themselves are valid and noble. Who could argue against eradicating poverty and hunger, achieving universal primary education, promoting gender equality and empowering women, reducing the child mortality rate, improving maternal health, combating HIV/AIDS, malaria, and other diseases, and ensuring environmental sustainability? It is simply that the goals have been constructed within the same *überframe*, which largely created the problems themselves. One only needs to look at who is advising the report:

[141] 'Global Governance' is the core concept of two of the leading academic institutes in Europe on the environment, the IVM of my own university (VU University, Amsterdam) and the Grantham Research Institute on Climate Change and the Environment at the London School of Economics.

I. Food And Agriculture Organization Of The United Nations, whose director believes it is impossible to 'feed the world' without the massive use of fertilizers (Reuters 2008c)
II. United Nations Industrial Development Organization, who sees industrial development as the key to poverty reduction
III. United Nations Conference On Trade and Development, which aims to integrate developing countries into the global economy
IV. International Trade Centre, which focuses on export as the path to development
V. As well as the OECD, World Bank, IMF and WTO, whose blending of democracy, human rights, and free market globalization were discussed in detail in Chapter Two.

The very institutions, which have been blamed for creating these problems, have been given global responsibility to develop the measures of success to solve them.

In the area of climate change, both the governing (UNFCCC) and scientific (IPCC) global bodies operate under this frame. The UNFCCC both ensures compliance – through economic models of 'standardization' – to nation–state obligations under the Kyoto Protocol, as well as facilitating the negotiations for a post–Kyoto, global treaty to address climate change in the long term. The IPCC is made up of scholars from around the world, who – while bringing very different worldviews with them – all adhere to the western rules of science, based on objectivity, separation, and the academic version of *market specialization* (narrow focus of expertise versus broad academic inquiry).

This is not to dismiss the efforts, nor the possible benefits, of these bodies. The purpose here is to simply identify the assumptions from which the negotiation, measurement, enforcement, and construction of climate change is based. For instance, in the same way that the western impulse towards 'standardization' can mistakenly categorize barter communities as impoverished, so does this allow nations to argue against emissions reduction, based on which benchmark it chooses. By the per cap standard Gibraltar, Qatar, and three Caribbean islands are the worst emitters[142]. By total emissions, China is the worst[143]. By total historical standards, the US is the clear

[142] www.eia.doe.gov/pub/international/iealf/tableh1cco2.xls

[143] www.eia.doe.gov/pub/international/iealf/tableh1co2.xls

"leader"[144]. With the addition of land use changes (most typically deforestation), Belize, Guyana, and Malaysia jump into the top five total emissions offenders (Houghton 2003), far surpassing the United States. These numbers – and the different ways in which they can be manipulated – have led to endless negotiations, with each country choosing the benchmark which plays most to its own advantage.

In the course of its research, climate science produces many numbers. Sometimes, one of these numbers sticks as a rallying point for laypeople in the public and civil sectors. One reference number used by scientists and policy makers alike is the number of degrees to which Earth should be "allowed" to warm before causing irreversible climatic changes. At the closing plenary of a large inter–disciplinary conference on climate change, it was publicly agreed by the scientists in attendance and conveyed to the Danish Prime Minister, who would later host the UNFCCC COP–15 Copenhagen meeting, that 2°C was the limit. This 2° became the basis for negotiations at the later UNFCCC meeting. Then, in late 2007 at the American Geophysical Union annual meeting, Hansen (2007) announced that we should not allow the CO2 concentration in the atmosphere to go over 350ppm[145]. While this announcement was made in a very scientific forum to little public fanfare, from that moment onwards, the number – 350 – became a mantra for environmentalists all over the world[146]. From a marketing perspective, this rallying point was extremely effective in promoting one of the biggest social protests in the world (CNN 2009, Jervey 2009). While the science behind the number is indecipherable to most of the non–scientific activists, the number itself brings a very western sense of objectivity and accountability.

B. <u>One World Marketplace</u>

As the natural world became objectified and measured by natural scientists, some have tried to place monetary value on its components. This quantification of "natural services" has spawned tradable financial tools from which private investors will profit, yet which will add little material benefit to the addressing climate change (Reuters 2009a). This valuation is best reflected

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[144] http://pdf.wri.org/navigating_numbers_chapter6.pdf

[145] In a follow-on article, (Hansen et al. 2008) explained: "If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO2 will need to be reduced from its current 385 ppm (parts per million) to at most 350 ppm (p. 1).

[146] www.350.org

in the growing discourse on *natural capital* (Hawken et al. 1999), the monetary value of the services provided by the natural world. Some estimate global natural capital at US$33 trillion, while some judge it as infinite and therefore immeasurable (Reuters 2008a). This discourse plays heavily into how Clean Development Mechanisms (CDM)[147], in which one nation state can invest in an emissions–reducing project in another nation state to offset their own excess carbon, are calculated. One hotly debated idea is the Reducing Emissions from Deforestation in Developing Countries (REDD). A recent report for the Convention on Biological Diversity (CBD) (Sukhdev 2008) showed that humankind loses US$2 — 5 trillion of natural capital (seven percent of GDP) every year "as a result of deforestation alone" (Monbiot 2008, Black 2008). In 2007, Ecuador asked for US$350 million (Environmental News Wire 2007) and received US$3.6 billion (Environmental News Wire 2010) not to extract one billion barrels of oil in the Amazon rainforest.

The World Wildlife Fund (2006) invokes the natural capital discourse when it claims: "humanity is no longer living off nature's interest, but drawing down its capital (p. 2)" in talking about the West's growing *ecological footprint*, defined by Venetoulis and Talberth (2005: 2) as a "population's demands on nature('s)…global biocapacity." Against the backdrop of the international financial crisis of autumn 2008, the WWF (2008b) now speaks of an *ecological credit crunch* if our global footprint, which "now exceeds the world's capacity to regenerate by about 30 per cent (p. 1)," is not quickly reduced. Under the current *nature as free* (Hajer 1996) system, "approximately 60%…of…ecosystem services are being degraded or used unsustainably… (and) the costs of degradation…shift…to (others and) future generations." (Millennium Ecosystem Assessment Board 2005: 39, 1). In response, the UN Environmental Programme co–developed Payments for Ecosystem Service (PES) using the model of the currently tradable carbon credits "to encourage beneficiaries to contribute their fair share to restoring and maintaining the flows" of services. These services are provided by the world's ecosystems to "people, companies, and societies (and) reduce the rate of biodiversity loss" (Forest Trends et. al 2008). One of the professed benefits of this program is the opportunity for the "rural poor…to augment their income as stewards of the land." The system has supposedly been introduced with several large caveats to ensure these same rural poor under-

[147] http://unfccc.int/files/meetings/intersessional/awg_4_and_dialogue_4/press/application/pdf/awg4_com_plus_red.pdf

stand, can enforce, and will benefit from it.

Part of selling free market capitalism as a panacea to a host of public problems includes portraying the public sector as a barrier to solving public problems, not as a solution maker (Bate & Tren 2006). The eighth millennium goal, to "develop a global partnership for development" simply codifies the One World Market überframe as the solution to other seven millennium goals. Yet, these public–private collaborations have been criticized for the very reason that they rely on commercial framing to solve public problems, bringing a profit motive into a not for profit arena (Piller 2007). Through the universalization and institutionalization of the dominant western worldview discussed throughout this dissertation, supra–national corporations have created a world market, which operates solely under its own free market rules. Today, these private corporations, which have effectively mobilized themselves away from the influences of local communities, regions, and nations, operate at a supranational level with little oversight. Commodities and parts may be bought from several nations, built in another nation, and finally assembled in another — each chosen for its lowest price, lowest tax structure, etc. — while the end products are sold to the highest worldwide bidder. This section will look at three industry examples of public–private ventures, which have evolved out of this milieu, and how these ventures have shaped public policy in each of its related area.

1. Industry Example: Pharmaceuticals

The global pharmaceutical industry is illustrative of the One World Market überframe in three ways. First, as we discussed in Chapter Two, the western ideas of ownership is codified within international intellectual property law. By the late 20th century, 25 percent of all patented pharmaceuticals contained indigenous knowledge (Peterson 1992), which had been collectively used for centuries by indigenous tribes (LaDuke 2007), and ninety–seven percent of these patents are held by global conglomerates (Howard 2001). The right to this ownership is backed by the full power of the World Bank (2003: 10) and the World Intellectual Property Organization (1979).

Second, this industry is one of the first to plead for public research money to help fund new medical cures, tax breaks, and preferential trading policies, which Nader (2000) first branded *corporate welfare*. Their own research focuses on protecting or extending patents of developing *me-too* drugs for western lifestyle diseases, such as hypertension, obesity, and anxiety. Be-

cause the pharmaceutical industry is run by an oligarchy[148], sometimes competing drugs are bought with the sole intent of slowing the research or simply eliminating them. This is euphemistically called "creating a competitive advantage." Because drugs and vaccines for *diseases of poverty* (GAVI Alliance 2009), such as AIDS, malaria, and tuberculosis (Bate & Tren 2006) are not profitable (Crooks 2001, Zandonella 2005), advancements most often come out of academic labs. The private sector then buys lucrative marketing and distribution rights and in turn spends much of its energy focused on patent protection. In the United States, the Bayh–Dole legislation of 1982 gave university labs the rights to any patentable products coming out of publicly funded research. In the push to commercialize the research findings of university labs (Henderson & Smith 2002), private companies made close to US$3 trillion (Gwynne & Heebner 2002) in the first 20 years following this legislation. Proponents argue that only commercial organizations can bring these products to market. The United Nations' World Intellectual Property Organization (2001: 13) explains:

> "Ground–breaking technology…frequently starts out as research in university laboratories. But transferring new technologies successfully from the lab to the market place requires access to the right infrastructure, funding and skills."

Even the non-profit Advance Market Commitment (AMC)[149], which has been credited with vaccine development for *diseases of poverty* by a mix of private and public foundations and organizations, argues that "while the key scientific breakthrough that leads to a successful vaccine may well come from a university laboratory or small biotechnology company, the biopharmaceutical industry is best equipped to translate this research into a successful product" (Zandonella 2005: 1). Some industry proponents argue that all public money is private money anyway – in the form of taxes – and is better spent on research that can be overseen by private companies with the appropriate level of research resources. They argue governments are unresponsive to patients, unlike the "customer focused" private enterprises (Bate & Tren 2006). Whether or not this is true, financial incentives to engage the private sector in public issues would be unnecessary if the motivation of the private pharmaceutical sector was purely disease eradication in-

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[148] Using the economic standard "four–firm concentration ratio" litmus test, in which the top four firms control more than 40 percent of the global market (Mahajan 2004).

[149] www.vaccineamc.org/about

stead of private sector organizations focused on profit. Yet, too often they are portrayed and portray themselves as able to work for public good.

2. Industry Example: Agriculture

At the High–Level Conference on World Food Security hosted by the Food and Agriculture Organization (FAO) of the United Nations in June 2008, organized to address Challenges of Climate Change and Bioenergy, the World Bank pledged U.S.$1.2 billion in grants for the food crisis in Africa. Shiva notes,"is a $1.2 billion subsidy to the chemical industry…if governments spen(t) a quarter of that on organic farming…you've solved your problems", while the U.N.'s Food and Agriculture Organization's own Director General, Jacques Diouf, argued: "You cannot feed six billion people today and nine billion in 2050 without judicious use of chemical fertilizers, (Reuters 2008c). Yet, a new report on Organic Agriculture and Food Security in Africa (United Nations Conference on Trade and Development and Environmental Programme 2008: 16) shows that "when sustainable agricultural practices covering a variety of systems and crops were adopted, average crop yields increased by 79% percent…(up to)… 128%...in East Africa." Hamer and Anslow (2008) agree, and a 2009 report by the Union of Concerned Scientists concludes "GE has done little to increase overall crop yields" (p. 1).

In April 2008, members of the intergovernmental International Assessment of Agricultural Knowledge, Science and Technology for Development (2008b) published their efforts to "evaluate the relevance, quality and effectiveness of agricultural knowledge, science, and technology." The Global Summary for Decision Makers concluded that "technologies, such as high–yielding crop varieties, agrochemicals and mechanization, have primarily benefited the better resourced groups in society and transnational corporations, rather than the most vulnerable ones" (2008a: 32). The IAASTD argues that mass production, science, and technology–based modern farming do not offer a silver bullet solution.

> "Pathogen produced toxins, veterinary drug and pesticide residues can cause short– and longer–term adverse, even lethal, human health consequences when present in food systems. These hazards increase with the length of the food chain…Diet is one of the leading risk factors for chronic illness…Changes in food availability and prices together with environmental, social and demographic factors (e.g. urbanization) have resulted in a worldwide dietary transition…(to high fat, processed western convenience food)… Many

> traditional foods, however, are rich in micronutrients and expanding their role in production systems and diet could have health benefits…The incidence and geographic range of (infectious diseases, such as HIV / AIDS and malaria,) are influenced by production systems (e.g. intensive crop and livestock), and economic (e.g. expansion of international trade), social (e.g. changing diets and living patterns), demographic (e.g. population growth and migration), environmental (e.g. land use and global climate change), and biological factors (e.g. microbial mutations)" (p. 19).

According to the IAASTD, any true solution to the food crisis and poverty must marry a combination of local, regionally–adapted farming practices and knowledge with targeted, not widespread, applications of bio–technology, i.e., genetically modified organisms (GMO). The report heavily emphasizes the need for food sovereignty through an "educated and informed public, a regulatory and implementation framework, and government accountability that ensures food stock management, control over food production, marketing, pricing and distribution, disaster preparedness" (p. 28). It also recognizes agriculture as "multifunctional…producing not only commodities (food, feed, fibers, agro–fuels, medicinal products and ornamentals), but also non–commodity outputs such as environmental services, landscape amenities and cultural heritages" (p. 9). Transdisciplinary work on the divisive debate on GMOs emphasizes that it is not a matter of simply throwing more information at consumers and local communities but, in understanding their specific concerns about food safety and sovereignty, to come to community–based decisions. Power and informed decision making is particularly critical in the relationship between corporations based in the "North" and communities based in the "South" (De Cock Buning et. al. 2008).

Yet, the ongoing debate over GMOs offers one of the best examples of both the One World Market frame and the influence of the agro–business and chemical oligarchy. Ten seed companies currently control 67 percent of the world's proprietary seed market, while the top ten agrochemical companies control 89 percent of the world market share (ETC Group 2008b). Former World Bank, WTO, and United Nations analyst, Raj Patel (2008, p. 11), use the metaphor of an hourglass to describe the millions of farmers on one end, the billions of consumers on the other end, and the relatively tiny number of corporations that control the relationship between the two.

The market consolidation of agro–business has been one of the biggest 'success stories' of global free market capitalism, albeit at the expense of local farmers. However, this consolidation could not have happened without the public assistance Nader billed as *corporate welfare*. Through a series of mergers and acquisitions, public–private ventures, market protection, and opportunism, large agro–businesses introduced GMO seeds, which purported to resist disease, drought, pests, etc. In order to be effective, however, these seeds required specific fertilizers which were only sold by the same companies. Because these seeds and fertilizers were considered patented products, the private enterprises that owned them then employed hundreds of investigators to stop farmers from stealing their technologies. These investigators were often accused of intimidation and harassment (Barlett & Steele 2008). Some neighboring farmers who were found with traces of these seeds on their own property were fined, even if the seeds were only found on their property because they had been blown there by the wind.

However, to avoid the cost of employing investigators all over the world, agro–businesses turned to a public–private venture with the U.S. Department of Agriculture (USDA) to aid the exportation of its products. With falling budgets, the USDA had increasingly turned toward private enterprises for collaboration. In return for its research, the USDA then jointly owned a patent, which "covers all seeds, both transgenic and everyday conventional varieties" and "receives licensing fees and royalty payments when its inventions come to market. (In addition) USDA scientists personally get a cut of royalties" (Broydo 1998). This public–private venture created *terminator seeds,* which are genetically modified to "eliminate (a seed's) natural ability to reproduce itself" (Korten et al. 2002: 7). The patent was subsequently sold–off to agro–business giant, Monsanto, which further licensed the technology to a select group of business partners. Because of the termination feature of their seeds, farmers are required to buy seeds every year. These farmers become virtually beholden to Monsanto and its partners for their livelihoods and ability to feed themselves.

Unlike prior public–private research programs which sought to improve food safety, the environment, crop viability, or consumer choice, the terminator seed program was conducted purely to increase the profits of a private company. According to the primary inventor of the new patent–protecting technique, USDA scientist Melvin Oliver: "The need was there to (stop) farmers (from) saving seed…(and) foreign interests from stealing the technology…(this puts)…billions of dollars spent on research back into the

system" (Broydo 1998). But, whose system?

Besides the broader environmental implications that come with losing the more complex natural systems associated with traditional farming (McKibben 1995), these seeds lead to monocropping and falling biodiversity (Kingsolver 2003) and allow the global agro–business oligarchy to threaten world food security. Private companies seeking to affect global policy in a variety of areas, either in collaboration with the U.S. government or independently, could theoretically deny seeds and/or the proprietary chemicals necessary to grow them to particular nation states and/or farming groups it opposed. While sounding alarmist, this hypothetical scenario echoes the *food as weapon* policy of former U.S. Secretary of State Henry Kissinger in Chile, who was noted for claiming, "control food and you control people." Anecdotal evidence from within nations under embargo, such as Hussein's Iraq, proves this point well. Even during WWII, the strategy of the "benevolent" Axis was "to use starvation to beat conquered peoples into submission (United States Department of Agriculture 1943: 1).

Public–private sector collaboration on foreign food policy goes back to the colonialism of the British East Indies Company and the Dutch *Vereenigde Oost–Indische Compagnie* (VOC) (United East Indian Company) and continued through the United Fruit Company's control of *banana republics*. Just as colonial–era collaboration triggered the 'religious' wars discussed in Chapter Two, the latter more recent public–private collaboration ultimately triggered a U.S. Central Intelligence Agency (CIA)– led coup in Guatemala in 1954, which led to a horrific forty year civil war that still scars the nation (Patel 2008). In addition, the consolidation of global food suppliers has led to unhealthy conditions for both workers and animals, as well as massive outbreaks of food–borne diseases, such as e.coli,, salmonella, mad cow disease, and swine fever (Pollan 2006, 2008, Schlosser 2001, van Ginneken 2003).

Besides severely restricting *food sovereignty*, "the right of peoples and sovereign states to democratically determine their own agricultural and food policies" (International Assessment of Agricultural Knowledge, Science, and Technology for Development 2008a: 18), terminator seeds end the ancient, sustainable practice of saving seeds. According to Friends of the Earth International (2007), more than 90 percent of food requirements in Africa are met with indigenous farming systems, such as saving seeds and native harvesting (LaDuke 2007).

Although Bill Clinton lamented treating food as a commodity in late 2008 (Hanley 2008), agro–businesses defend their market approach and see climate change as a great opportunity to refashion themselves as climate saviors (ETC Group 2008a). Although "many of the world's poorest countries, destined to be hit hardest by climate change, have rejected biotech crops, citing environmental and economic concerns,…biotech giants (BASF (DE), Syngenta (CH), Cargill (US) and Monsanto (US)) are hoping to leverage climate change as a way to get into resistant markets…(even though) gene patents generally preclude the age–old practice of saving seeds from a harvest for replanting, requiring instead that farmers purchase the high–tech seeds each year" (ETC Group 2008b). Large agro–businesses have used the WTO to foist GMO products on wary populations, including other western nations (Becker 2003) [150].

In addition, the massive farm animal industry accounts for 18 percent of worldwide GHG emissions (Steinfeld et al. 2006). As part of the western industrialization in the 19th and 20th centuries, "farmland was widely shifted from labor–intensive agriculture to capital–intensive cattle raising, … (which) led to an explosion of meat consumption" (van Ginneken 2003: 172). Rapidly developing nations, such as China, are continuing this trend, and meat consumption is expected to double between 2000 and 2050 (Steinfeld et al. 2006). Even though this consumption choice will clearly have an enormous effect on climate change – beef production emits eleven times more GHGs than chicken and 100 times more than carrots (Rosenthal 2008) – and red meat has been linked to higher mortality rates (Sinha et al. 2009), Laurence Wrixon, executive director of the International Meat Secretariat, claims "whether you like it or not, there's going to be rising demand for meat". Some environmentalists see a logical and ethical link between environmental responsibility and vegetarianism (Gandhi 1959, Singer 1989). Others argue that locally available animals, which are raised humanely and sustainably, are critical in many instances to local food security and nutrition (Kingsolver 2008).

While the pharmaceutical industry does not necessarily have a direct link to climate change – except for indirect affect, such as the enablement of industrial farming with antibiotics – it does provide a sharp illustration of western ideas of ownership and how they feed into the One Global Market überframe. The agriculture industry, on the other hand, illustrates how seeming-

[150] The WTO has the power to punish nations for non–compliance with trade agreements.

ly auxiliary issues of hunger, food, and farming – and the use of western deep frames – tie more directly into climate change and its disproportionate influence on western public policy making. However, it is the extractive industries of oil, gas, and coal which provide the most illustrative examples of the challenge that the One World Market *überframe* presents in addressing climate change.

3. Industry Example: Energy

For more than a decade (May 2007, Revkin 2009), leading oil, gas, and coal companies have leveraged the perceived existence of skepticism among scientists into a deliberately misleading campaign against the scientific basis for climate change, even as they internally recognized its existence and threat[151]. Between 1988 and 2006, Exxon alone gave nearly U.S.$23 million (Greenpeace 2007a, b) to more than forty organizations, such as the Heritage Foundation and Competitive Enterprise Institute (see Mohin 2006 for more detail), which seek to "undermine mainstream scientific findings on global climate change or have maintained affiliations with a small group of 'skeptic' scientists who continue to do so" (Mooney 2005). In 2006, the Royal Academy of Science (2006) – Britain's national center of science – sent a letter to Exxon, which expressed its "disappointment at the inaccurate and misleading view of the science of climate change that (public Exxon) document(s), present…(and) concerns about the support that ExxonMobil has been giving to (at least 39) organisations that have been misinforming the public about the science of climate change,…(including funding of)… $2.9 million to organisations in the United States." A lesser–known American company, Koch Enterprises, which makes billions in the energy industry, contributed more than Exxon in only four years (US$24.9M between 2005–2008) to these same climate denier groups (Greenpeace 2010).

These campaigns relied on a "politicization" of science by framing their skepticism as "fact does not exist…it is all opinion"; consequently everyone has an agenda or vested interest. Boykoff and Boykoff (2004) analyzed media coverage of the U.S. prestige press to understand why there was such a disparity between the virtual consensus within scientific journals and the public perception that no consensus existed among scientists. They found that the U.S. media's attempt to offer balanced reporting on anthropogenic

[151] This campaign of disinformation is reminiscent of the campaign waged by large cigarette makers to discredit the link between smoking and lung cancer even after they had evidence that the link was valid (Ong & Glantz 2000, Saloojee & Dagli 2000).

climate change led to a public perception that more debate within the scientific community existed than actual did, i.e., *balance as bias*. This public perception of scientific debate on the existence of anthropogenic climate change still persists today (Leiserowitz et al. 2009).

However, the claims of most climate change skeptics eventually point to the same two pieces of evidence: an article published by the Journal of American Physicians and Surgeons (Robinson et al. 2007), which claimed that global warming was good for nature, and the Oregon Petition, which urged the U.S. to reject all climate treaties because there was no scientific proof of anthropogenic climate change. This petition, and a copy of the article, were sent to tens of thousands of academics across the United States. However, despite its claims otherwise, the Journal of American Physicians and Surgeons is not a peer–reviewed journal and does not follow the guidelines for publications of the National Academy of Sciences (NAS), even though its authors copied – some would say plagiarized – its format to give it the appearance of a NAS article. In addition, the journal is published by the Oregon Institute of Science and Medicine (OISM), which is owned and run by the author of the article and originator of the petition. Despite these less than stellar credentials, the OISM claims that thousands of PhD holding scientists have signed its petition. These signatures, and the quasi–scientific article, remain the most widely cited evidence of climate change skeptics.

Despite the obvious conflicts of interest, however, the extractive industry continues to sell itself as the solution to public problems. Over the past few years, Shell Oil has co–hosted a series of debates about the future of energy with the *Financieele Dagblad* (Dutch Financial Daily). Each debate features a representative from Shell and protagonists, such as Liesbeth van Tongeren, Director of Greenpeace Netherlands[152]. During one debate (Shell & Financieele Dagblad Intelligence 2007a, *my translation and emphasis*), Jan van der Eijk, Chief Technology Officer of Shell, stated:

[152] The most interesting dynamic in the room, though, was the behavior of Ms. Van Tongeren, who admitted that she had assumed she would be in the minority. However, even once she realized that the majority of the people in room were more sympathetic to her stance than that of Shell's, she did not change her defensive posture or language. She was reminiscent of freedom fighters' inability to lead once they finally have power. Greenpeace should work with the assumption that they are in the majority opinion and empathy when they walk into any room.

> "There are three hard facts we must work around in dealing with global warming…energy demand in the coming twenty–five years will grow twenty–five percent;…in 2050, at least half of the world's energy will still come from fossil fuels; …and with the best intentions of the world, there is no possibility that the world could run on CO2 free energy by 2050"[153].

These departure points of Shell – and possibly the rest of the energy oligarchy – were not substantiated, but presented as fact. Even while calling for policy to tackle climate change, the executive director of the International Energy Agency (2008), Nobuo Tanaka, recently said: "Oil will remain the world's main source of energy for many years to come, even under the most optimistic of assumptions about the development of alternative technology." In addition, the need for fossil fuels is often blamed on the consumers themselves. Catherine Reheis–Boyd of the Western States Petroleum Association states: "We know that when (consumers) want fuel, they want it when they want it and where they want it, and they want it to be affordable. If they don't have that, they're usually pretty expressive about how unhappy they may be." Even in the immediate wake of an ecologically and economically–devastating oil spill in the Gulf of Mexico in April 2010, proponents of the oil industry declared that the disaster would simply lead technology developers to invent "100 percent fail safe" ways to continue drilling. We "should…continue to explore for and produce petroleum from offshore areas, (because)… our society and the rest of civilization depends upon plentiful power to supply us with shelter, food, security and comfort (Burnett 2010)".

Oil companies have made much–publicized forays into alternative, cleaner sources of energy. Yet, while these organizations are ostensively private companies, they often beg for public investment money to research green energy and portray themselves as public bodies working in the best interests of civil society. This occurs at a time when the companies are booking record profits (Bergin & Erman 2008). Their strategy seems effective. Most attendees of the Energy Square debates – whether from the private, public, or civil sector – clearly seemed to look to the business community to pro-

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[153] De vraag naar energie in de komende 25 jaar met zo'n vijftig procent gaat groeien; in 2050, steeds minstens de helft van de energievoorziening uit fossiele bronnen afkomstig zal zijn; met de beste wil van de wereld geen mogelijkheid te zien waarbij de wereld in 2050 geheel op CO2–vrije energie draait.

vide climate change solutions. There was very little discussion about energy savings and too much discussion about technologies, such as carbon capture and storage (CCS), from which Shell stands to profit. Although Shell acknowledges that CCS technology is not yet beyond the testing stage, it is discussed in policy circles (and included in UNFCCC guidelines[154]) as commercially available. Private sector influence was further reflected by Tanaka's additional comment: "it is clear that the energy sector will have to play the central role in tackling climate change."

Despite these publicized forays into alternative, cleaner sources of energy, in 2007, European investment in oil, coal, and other "dirty" energy source technologies, such as CCS, totaled €80B, while only €10B was invested in renewable energy of any kind. Much of this came from smaller companies they had acquired (Shell & *Financieele Dagbald* Intelligence 2007a). Furthermore, in early 2009, the energy oligarchy quietly eliminated even their paltry investment for renewable energy technologies, such as solar, wind, and hydrogen, choosing instead to invest in centralize–able quasi–renewable energy sources, such bio–mass (Krauss 2009, Webb 2009). "From 1994 to 2009, U.S. taxpayers invested (in the form of tax subsidies to the massive oil companies) $80 in oil for every $1 invested in clean, renewable energy" (Pfund and Healey 2011).

In 1976, Lovins called the combination of fossil fuels and nuclear power the 'hard energy paths' – not just for their lack of sustainability, but for their geopolitical implications. He argued for soft energy paths, those flexible, resilient, sustainable, and benign source of energy, such as solar, wind, and biomass, because they were both de–centralized and more efficient for the end needs of energy consumers. Yet, energy companies have significant motivations to slow the transition to renewable energy until their oil fields and coal mines are completely empty, they have amortized all associated capital costs, and they have found a way to control and profit from the energy sources. Unfortunately, from an anthropogenic climate change and public interest standpoint, this may not happen before significant reductions are needed in oil and coal usage. Like new pharmaceutical discoveries, new

[154] The UNFCCC guidelines were taken from the IPCC Special Report on Carbon Capture and Storage (SRCCS). Even though IPCC reports are meant to be based on science alone, one of the contributing authors to the SRCCS confirmed that there was undue political pressure from nations with private sector interest in CCS technology to word the Summary for Policy Makers (SPM) in such as way as to make the technology seem more commercially-available than it was (Confidential Personal Communication 2009).

energy innovations are often made in academic labs and the garages of small start–ups, not the large organizations which make the current energy oligarchy. Alternative energy sources, such as biodiesel made from everything from plants to trash to spent cooking oil (Arnoldy 2007) and landfill worms (Wald 2008), may not be already overwhelmingly prevalent because the energy oligarchy has not yet figured out how to make money with it. It is just too local, too simple, and too efficient.

Researchers at MIT state: "in one hour, enough sunlight strikes the Earth to provide the entire planet's energy needs for one year" and believe they are less than a decade from using sunlight to solve the world's energy problems on a very local basis (MIT News 2008). Yet, MIT just signed an agreement with Shell, which will allow Shell to control how and where this technologically is further developed and shared (MIT Energy Initiative 2010). Given that Shell's stated goal for the agreement is to, "strengthen…(its own) global technology leadership," a statement above by its Chief Technology Officer that: "with the best intentions of the world, there is no possibility that the world could run on CO^2 free energy by 2050"[155], and a follow-on statement that: "Shell will no longer invest in renewable technologies such as wind, solar and hydro power because they are not economic" (Webb 2009), it seems unlikely that this technology will be allowed to develop quickly enough to surpass the world's need for Shell's fossil fuels products, nor that it will eventually be widely shared for public good. Shell bought all of this control for US$25M, a pittance compared to the €80B that European energy companies alone invested in oil, coal, and other "dirty" energy source technologies, such as CCS, in which Shell has a huge stake. Yet, for budget starved universities, it makes a tremendous impact.

4. Climate Change as Profit Center

Outside of the energy sector, corporate managers started out skeptical of climate change, but have accepted it over the past 20 plus years along the *traditional adaptation curve for innovation* (Rogers 1964). This was, of course, aided by the sea change of public awareness and acceptance (BBC 2007, Ereaut & Segnit 2006, Langer 2006, *Rijksinstituut voor Volksgezonheid en Milieu* (Royal Institute for Health and Environment) 2004, WorldPublicOpinion.org & Chicago Council on Global Affairs 2007). Over the last decade, "climate change deniers" have became a minority in the private sector. In

[155] "met de beste wil van de wereld geen mogelijkheid te zien waarbij de wereld in 2050 geheel op CO2–vrije energie draait" (Shell & FD Intelligence 2007a).

2008, one of the largest global accounting firms, KPMG, opened its report on climate change with the declaration: "Climate change needs no introduction. It is now widely regarded as one of the most serious challenges the world faces with consequences that go far beyond its effects on the environment" (p. 5). To leverage this, nearly every major corporation in the world, including some of the worst environmental offenders, such as Exxon, Walmart, and McDonald's, have engaged in *greenwashing*, the "co–optation of environmental concerns (by) casting environmentally destructive corporations as environmental innovators" (Tokar 1997: xiv)[156]. Greenwashing has eroded public trust in corporate claims. Richard Branson generated massive publicity (and criticism) with his "green airplane stunt" (BBC 2008a) and "$25 million prize…to anyone who can…blunt global climate change by removing at least a billion tons of carbon dioxide a year from the Earth's atmosphere" (Sullivan 2007). Paradoxically, many corporations, which truly engage in social and/or environmental practices[157], choose to *greenhush* (Signitzer & Prexl 2007) their good works to avoid the charge of greenwashing.

Even with the pressure from overwhelming scientific evidence and public awareness, Exxon still continues to secretly fund several denier organizations (Adam 2009). When pushed, Exxon concedes the existence of anthropogenic climate change, but frames its mitigation as a choice, not an obligation. This frame of choice, which implies that the choice to do nothing exists without consequence, was reflected by those who argued that the financial crisis, which started in late 2008, must delay any climate change treaty (BBC 2008c). Political leaders also illustrated this frame of choice when they announced, three weeks before the final post–Kyoto negotiation in December 2009, that they were delaying reaching a new agreement because the differences between negotiating parties was too great (Cooper 2009).

Today, the vast majority of large multinational corporations have become quite practical about anthropogenic climate change and see it as just another market risk to leverage and accommodate if they want to remain viable and competitive (LEED 2003, Lovins & Lovins 1997, Scherer 2007, Shell 2005). The energy giant, Shell, is known for its 20–year "scenario building" to predict future risks. In Shell's current assessment through 2025, the com-

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[156] Ridgeway (2008) offers a good example of how corporations (BP in this case) use framing to *greenwash* their image.

[157] see http://www.ceres.org/declaration/sign/who-has-signed for examples

pany devotes an entire section of the final report to *Climate Change and the Fate of Kyoto* (Shell 2005: 39–44), stating: "Climate change has become a significant risk on the balance sheet of companies. While political stances remain widely divergent, notably on either side of the Atlantic, a quiet revolution has indeed begun in company boardrooms and in the marketplace."

As awareness of anthropogenic climate change has grown and political leadership in some of the largest polluting nations failed (Gettleman 2006), some business leaders have increasingly taken a more proactive policy role (Vanity Fair 2006a, b). In December 2007, prior to the quarterly UNFCCC–led, post–Kyoto negotiations held in Bali, Thailand, 150 major corporations from around the world, the majority of which are headquartered in Europe, published the *Bali Communiqué*. The communiqué "called for science — rather than what is considered politically palatable or reasonable — to be the defining factor in deciding what reductions in greenhouse gas emissions are required to avoid dangerous climate change, (a call whose) intent and significance should not be underestimated" (Spratt & Sutton 2007). Furthermore, many private organizations have organized themselves into a variety of trade groups, such as the following:

I. *The Carbon Principles* formed by Citigroup Inc, JP Morgan Chase & Co., and Morgan Stanley to provide "climate change guidelines,… (which) include the impact of future global warming legislation on the loan risk of building new coal–fired power plants" (Lee 2008).

II. *The U.S. Climate Action Partnership* formed "to call on the federal government to quickly enact strong national legislation to require significant reductions of greenhouse gas emissions" and laid out a "blueprint for a mandatory economy–wide, market–driven approach to climate protection…to underscore the urgent need for a policy framework on climate change" (U.S. Climate Action Partnership 2007).

III. Eleven huge multinationals teamed up to create the *Supply Chain Leadership Collaboration* "to see how they can work with thousands of their suppliers to curb greenhouse gas emissions" (Reuters 2008b).

IV. *World Business Council for Sustainable Development* (2008) claims to "participate in policy development to create the right framework conditions for business to make an effective contribution to sustain-

able human progress; develop and promote the business case for sustainable development; (and to) demonstrate the business contribution to sustainable development solutions and share leading edge practices among members."

V. *Rocky Mountain Institute* (Lovins & Lovins 1997: 39) mission statement holds to "foster the efficient and restorative use of resources to make the world secure, just, prosperous, and life–sustaining,… show businesses, communities, individuals, and governments how to create more wealth and employment, protect and enhance natural and human capital, increase profit and competitive advantage…(whose) work (has) a strong emphasis on market–based solutions."

Climate change itself has also bred entirely new industries for carbon offsetting[158], bicycle sharing, alternative energy, eco–lifestyle, and green fashion. As well, a whole new series of conferences have sprung up to help businesses plan for the effects of climate change and a changing political and consumer milieu, such as *Ethical Corporation Conference: Not An Oxymoron*[159].

Some corporate players see the private sector as an engine of true social change. They promote concepts such as the *Triple Bottom Line* (McDonough & Braungart 2002), defined as a "workable sustainability between people, planet, and profit, where every project looks at the social, economic, and environmental impacts it has on the world" (Ford 2005) and a *restorative economy* (Hawken 1993b). This group believes that "to continue to thrive and evolve we need to redesign our systems to obey the laws of nature including the laws of gravity, thermodynamics, biology, and ecology to create systems that can co–evolve with and enhance the evolutionary capability of natural systems" (Eisenberg & Reed 2003). At the heart of this philosophy is the idea that any man–made structure or activity should be self–sustaining, i.e., producing and using its own energy, water, and oxygen. In addition, it should also consume its own waste, provide in advance for its own decomposition, and contribute zero or a positive impact on its environment (Delaware North 2003, McDonough Architects 1992, McDonough & Braungart 2002). Materials and practices, such as indigenous materials, low–embodied energy materials, renewable materials, recyclable materials, non–toxic materials, low–energy and non–polluting transport, urban agriculture, mixed

[158] www.terrapass.com

[159] www.ethicalcorp.com

building types, and eternally–preserved open spaces facilitate zero impact[160] (Eisenberg & Reed 2003).

Today, many in the private sector see climate change, not just as a risk to be minimized, but as a commercial opportunity to exploit. Sixty percent of 250 of the world's largest companies are already realizing new business opportunities related to climate change (KPMG 2009)[161]. The *Carbon Disclosure Project* reported that "82% of the Financial Times 500 see opportunity with climate change" (Innovest 2007: 8, *paraphrased*). Even the scientifically–based IPCC emphasized in the Summary for Policymakers of its Fourth Assessment Report on Climate Change Synthesis Report that "there is high agreement and much evidence of substantial economic potential for the mitigation of global GHG emissions over the coming decades" (IPCC 2007: 14). Framing climate change as an economic issue, e.g., the Stern Report, and a business opportunity, centralizes the way both the problem of, and solutions for, climate change are imagined, e.g., focusing on carbon trading and technology development instead of localized, community–based solutions.

Perhaps, not surprisingly, the focus on centralized, technology–oriented solutions in current climate change negotiations clearly reflects the views of the huge multinational, predominantly western corporations, which have wielded such disproportionate influence over the public perception and policy solutions for environmental emblems to date. Even with the recognition of the historical responsibility of the western world – and the industrialization which led to climate change – the solutions to address it remain trapped in the same centralized, technology–oriented frame which solved prior environmental emblems; what Hajer (1996) calls the *ecological modernization* frame.

C. The Myth of the Private Sector

Often it is the same large multinational corporations, which argue for the efficiency of the free market while, simultaneously, pleading for public re-

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[160] In Kalundborg, Denmark, a variety of symbiotic industries have co–located into one eco–park where they literally consume each other's waste to add up to zero impact, mimicking mature ecosystems in their "closed–loop manufacturing cycle." This developed spontaneously over a number of decades and today comprises some 20 projects.

[161] However, while the business community widely recognizes climate change as the biggest challenge of the 21st century (KPMG 2008), "Only 1.3% of articles published in top–tier management research journals are focused on environmental issues and an even smaller subset tackle climate change" (Whiteman 2009).

search money to help fund new technologies and medical cures and seeking the tax breaks, government grants, preferential trading policies, and financial bailouts, which Nader (2000) first branded *corporate welfare*. Nader argued this was a form of political corruption. The massive public monetary bailouts of the financial industry in autumn 2008 prove the concept is alive and well nearly 50 years after Nader's warning. That corporate welfare is the antithesis of the free market principle seems to escape many. Yes, this dualism has successfully created a sense of public obligation to keep private corporations profitable[162].

In the middle of the energy crisis Exxon proudly announced quarter after quarter of record–setting earnings. Goldman Sachs', Citigroup, JP Morgan Chase, and Bank of America all proudly announced some of their highest earnings months after being bailed out by tax payers who still face high unemployment and mortgage default rates, as well as cuts in public services. These same banks are now spending millions of dollars to prevent new regulations, which would prevent another such crisis. Increases in the Dow Jones, FTSE, and Nikkei are announced by Wall Street as signs of an economic recovery, even though these increases have little material effect on the general public. This glaring contradiction between excessive corporate profit and public problems has not garnered the public outrage one would expect. It can be partially explained by the dominance in America mythology of the *self–made man* (discussed in Introduction) and the still unquestioned belief that any money the wealthy do not pay in taxes is invested in businesses that create jobs. There is little evidence to support this, yet it remains a strong discourse in the United States[163]. This is also tied to the belief in voluntary charity instead of public programs. Although voluntary charity is elitist to the core, it again supports a Protestant view of individual responsibility and the American Dream. If you work hard enough, you too can be rich. By contrast, those who are poor are considered lazy. This drives the conservative stance on immigration. Despite America being largely a nation of immigrants, this worldview sees immigrants as leeches on the backs of hard–working people. The image of illegal immigrants as unem-

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[162] This frame was well–illustrated in a recent debate in the US. Instead of a debate and policy on health "care", it was a debate on health "insurance", and the focus was on keeping the insurance companies profitable.

[163] Southern California Public Radio (2010) and AnnArbor.com (2010) provides illustrative examples of this discourse. Note how many of the commentators believe that the wealthiest 1% of Americans pay a higher tax rate than the average American, which even the business bastion of Forbes (Novack 2010) discounts.

ployed, welfare–collecting parasites draining the United States of its health care, education, and jobs (although this contradiction with the unemployed frame is rarely noted) is a powerful rallying point for many who cannot or will not blame the current free market system. It is this system which brought about the collusion of crises in 2007/2008/2009, including climate change and its auxiliary challenges. Despite the promises of free market capitalists to solve public problems, evidence has been growing over the last decade against each of the basic tenets of its ideology, outlined in Chapter Two.

I. *Privatization* has often led to higher prices. For example, partial privatization of the medical program for American retirees — Medicare — resulted in a 15 percent increase in costs by commercial insurers over the program administered directly by the government (New York Times 2008). The privatization of British railways led to whole communities deemed unprofitable, thus being cut off from the railways. Energy privatization led to massive blackouts in California and the Northeastern U.S. The financial bailouts in late 2008 privatized profits while nationalizing the underlying debt. In addition, the profit model can actually work in direct opposition to public policy goals. Deregulated energy companies provide one of the best examples. When energy is deregulated, i.e., converted from a not–for–profit model to a for–profit model, its product — the energy unit — is charged by consumption. Since private energy companies profit from each additional energy unit sold, there is scant motivation for them to encourage a reduction in energy consumption. This would only lower the company's profits.

II. The economic crisis of autumn 2008 further demonstrated that an *unregulated market*, like all human constructions, is inherently fallible and beholden to the abuse and greed of every human system in which there is too little oversight and the possibility for penalty. Abdelal et al. (2010) clearly outlines how the models and forecasts beloved by economists are as much a constructed reality as any other aspect of human society, as opposed to a material, rational reality.

III. Finally, the food crisis of summer 2008, which flared shortly after the world's price of grain soared beyond the means of 75 percent of the global population, reflected the dangers of market specialization. Former U.S. President, Bill Clinton, admitted at World Food Day:

> "'We all blew it, including me,' by treating food crops 'like color TVs' instead of as a vital commodity for the world's poor" (Hanley 2008). Clinton went on to link the pressure by the neo–liberalist World Bank and International Monetary Fund on African states to drop their subsidies for farming in exchange for aid to a "decline (in) food self–sufficiency and (an increase in) food imports." This created a needless reliance on foreign food, which doubled in price from 2006 to early 2008. This should not have come as a surprise as the Carnegie Foundation found in 2005 that: "benefits of agricultural trade liberalization flow overwhelmingly to rich countries, while developing countries actually suffer slight losses as a group" (Polaski 2005).

Yet, despite the mounting evidence against free market capitalism, and a public push for more market nationalization, regulation, and protection, the structure and base beliefs of free market capitalism – and the One World Market *überframe* – still dominate the way policy issues and solutions are framed in the western public and private sectors. To date, no reversal of its influence has yet to materialize. Even as western governments pumped staggering sums of public money into collapsed financial institutions, they still relied on the basic belief in free market capitalism of self–correction, i.e., the markets will self–correct and public policy should play the role of market enabler. The International Monetary Fund (2008) and the New York Times Editorial Board (2009) persist in calling for more global coordination of wealth and trade. The latter continues to push free trade as the panacea to helping poorer countries by supposedly "providing them access to export markets in the rich world." Yet, they claim, these same poor nations must compromise on their own food security by lowering "barriers to protect farmers against sharp increases in food imports from cheaper producers abroad…(as) reviving trade is essential for economic recovery". Many terms of these same free trade agreements favor supranational corporations and limit both local development impacts, as well as the ability of the national government to regulate the environmental and social effects of the activities (United Nations Conference on Trade and Development 2013b). Supranational corporations have increasingly used Investor-State Dispute Settlements (ISDS), which are included in most trade agreements, to challenge national laws it sees as inhibiting its business operation and profitability. One settlement stated that the human right to water must be "counterbalanced with the rights of the investor", while another claimed, "consideration of rights of indigenous peoples under international law…was not part

of the tribunal's mandate" (United Nations Conference on Trade and Development 2013a: 18, 21). Concern over the increasing number of these suits filed by global businesses from developing countries against national developing governments have created a backlash which may threaten corporations ability to file such suits in the future. The United Nations Conference on Trade and Development recently launched its Investment Policy Framework for Sustainable Development to ensure that international trade agreements offer the host nation "inclusive growth and sustainable development" (United Nations Conference on Trade and Development 2012: 11), although these don't seem to have been incorporated into the heretofore secret negotiations of the Trans-Pacific Partnership (TPP), which would constitute 35% of global GDP (United Nations Conference on Trade and Development 2013b: 5).

Even the deliberate decision by the U.S. Treasury to only use the U.S.$700 billion bailout for intervention in large financial institutions, instead of easing individual home foreclosures, resounds with the logic of Reagan's "trickle–down economics." Unfortunately, the U.S. public discourse on "economic stimulus" programs, where the personal savings rate is effectively zero (Ferguson 2005), focuses on getting Americans to spend money again on consumer goods[164]. The mentality is such that spending, even when an individuals' financial situation is uncertain, is equated with patriotism. As a representative from the devastated construction industry – which fell 80 percent in one year – put it, in arguing for taking that risk: "It's a little patriotic for homeowners to say 'Hey, we appreciate the situation that we're in, and we want to spend money and stimulate the economy and help create jobs'" (Scelfo 2009).

Some may argue the confluence of crises – in the economy, food, health, and energy – which began to build in the second half of 2007, has already discredited free market ideology (Barber 2009, Chavagneux 2009, Rothkopf 2008)[165]. French President, Nicolas Sarkozy, even claimed: "Laissez–faire

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[164] There are early indications from the U.S. Bureau of Economic Analysis that the financial crisis is encouraging slightly higher savings rates (Rampell 2009).

[165] Neo–liberalist historian, Niall Ferguson (2005), wrote a widely–read *Foreign Affairs* article "Sinking Globalization" only three years before the crisis. In it, he correctly forecasts the second sinking of globalization (the first occurred with the start of WW I). However, he never contemplates that the catalyst for this sinking would come from an internal collapse of the global financial system itself, instead of an "Islamo–Bolshevist" organization, such as al Qaeda, and its modern–day Lenin, Osama bin Laden.

(capitalism)…the all–powerful market that always knows best is finished" (Vucheva 2008). Yet, the likelihood of significant changes to the dominant global system will depend on whether the current centralized, policy–oriented western worldview addresses the multiple crises in time to neutralize the growing counter movement against it. For, as it becomes more visible that the current dominant system in power cannot solve global problems, such as climate change, proponents of radically different systems will have longer to make their case. Part of making their case has been to link the various crises together, using anthropogenic climate change as a discoursive metaphor. This makes it increasingly difficult for centralized policy instruments and technologies to continue with the silo mentality, which assumes that environmental and social issues can be addressed independently of the other.

The examples and discussion above are not meant to demonize the private sector. They are meant to highlight the discrepancy between the motivations of the private sector organizations as economic entities created to make a profit and the public sector, which is responsible for the public good. The private sector simply works from financial self–interest, which does not, and cannot by its very nature, truly take long term, common good goals into account in its decision making processes (Soros 1998). This self–interest viewpoint is illustrated well by the key advice the accounting and consultant giant, KPMG, offers their clients on climate change: "First, access and address the regulatory, reputational, physical and legal risks of climate change to your own operations and, then, look for ways to profit from it" (KPMG 2008: 5, 7, *paraphrased*). Nothing in this advice points to common good. Private sector organizations are beholden only to those who own them. For most large multinationals, these are share–holders, who demand a return on their investment. In contrast, the public sector is responsible for the public good. As one of the Energy Square participants, Jan Terlouw, pointed out:

> "…while it is understandable that companies such as Shell work in their own best interest, politicians must make these interests known and in cooperation with these 'big players' see how a portion of their investment can already be used for clean energy…if they are not prepared then the government must take the responsibility and invest themselves, just like they paid earlier for the roads, canals,

dikes, trains, and the post (Shell & *Financieele Dagblad* Intelligence 2007b, my translation).[166]

D. False Choice: Liberal versus Conservative Anti-Globalization

In Chapter One, we discussed the false choice cultural wars in the United States between liberals and conservatives. While these two groups typically hold different views on a range of issues, both decry the current global system, which has led to the confluence of current crises. Yet, each blames a different global actor. Liberals tend to blame the global private sector, while conservatives tend to blame the global public sector, a.k.a. the United Nations. The former sees One World Market as evil, while the latter demonizes One World Government. Yet, under the rhetoric, both would argue for greater community strength, and self–sufficiency, at a local and national level, albeit via different policy tools.

E. Chapter Summary

The primary conceptual insight in this chapter was the identification of the third deep frame – an *überframe* – of the western worldview, "One World Market", and the analysis of how it plays out in global public policy and three key global industries addressing current environmental and social challenges. The chapter concluded with a look at how the current confluence of crises – in the economy, food, health, environment, and energy – have begun to discredit free market ideology. With this chapter we conclude our analysis of the *diagnostic framing* of climate change, the first of Snow and Benford's (1988) three core framing–tasks, which have marked successful social movements in the past (Snow et al. 1986). Chapters Two through Four looked at the historical development of the *problem and causes* of our current situation and identified how western cultural, deep frames construct our understanding of environmental problem and limit the range of solutions we are willing to consider to address them. The third section of this manuscript – Chapter Five – seeks to 1) understand why individuals would change and 2) articulate a solution and strategy to the wicked problem of climate change, the second and third tasks of *global interpretive frame transformation.*

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[166] Het (is) op zich begrijpelijk dat bedrijven als Shell opkomen voor hun gevestigde belangen, maar hij vindt dat de politiek die belangen zichtbaar moet maken en in overleg moet treden met "de grote spelers', zoals hij ze noemt, om te zien hoe nu al een deel van de investeringen verged kan worden naar duurzame energie. "En zijn ze daar niet toe bereid? Dan moet de overheid haar verantwoordelijkheid nemen en zelf gaan investeren, net zoals ze vroeger wegen, kanalen, dijken, spoorwegen en de posterijen heeft betaald."

Section Three: Prognostic & Motivational Framing

Framing Tasks Two and Three: Understand Why Others Would Participate, Articulate a Solution and Provide Tools to Implement It

FIVE

The Catalytic Potential of Climate Change

> "Thinkers from Rousseau…to the late–twentieth century Greens have proposed that man's presumptions of his own apartness from nature is the prime cause of the environmental degradation of the earth." – Bate (2000: 36)

> "the suggestions within American culture that well-being and happiness can be found through striving to become rich, famous, and attractive may themselves be chimerical. (Instead, we) are inherently oriented toward being active, agentic, and meaningfully related to others" – Kasser & Ryan (1996: 286)

The last section focused on the diagnostic framing of anthropogenic climate change through the historical development and deep frames of the dominant western worldview. We looked at how the western worldview, which prizes individualism, objectivity, linear progression, human entitlement, and the pursuit of material wealth, led to a confluence of environmental and social challenges. This last section will turn to the *prognostic* and *motivational framing tasks* (Snow & Benford 1988) to understand why individuals would be motivated to change and articulate solutions and strategies towards realizing that change. These tasks are predicated the acknowledgement that the current dominant worldview – or *dominant social paradigm* (Pirages & Ehrlich 1974: 43) – has been unable to effectively address climate change – and its auxiliary issues. This failure has enabled an *insurgent discourse* (Cox 2010: 64) or *new environmental paradigm* (Dunlap & Van Liere 1978, Dunlap et al. 2000) to gain credibility. The longer the *dominant social paradigm* is seen to be incapable, the more time this different paradigm has to make its case (van Ginneken 2003). Social movements are a direct result of humankind's search for meaning, when existing social systems lack adequate *feedback and symbolization* (Klapp 1969: 14). While this dissertation has taken a critical view of the cultural imperialism and globalization waged by the West, one of the benefits of an increasingly connected

world is that we no longer need to be bound by our physical place on the globe. Traversing – both physically and virtually – across this diverse Earth opens up new, more egalitarian ways of communicating to better understand nature and each other and offers a wider range of thinking for better problem-solving. However, any shift in the dominant paradigm will begin from within a society accustomed to relative material comfort and already aware of the larger world through virtually instantaneous access to information from around the globe. In other words, the core tenets of the dominant western worldview form the base from which change will be wrought (Gramsci 1992, Snow & Benford 1988).

The western world is unlikely to ever return to small, indigenous villages, sustenance living, and pagan worship. However, the *perfect storm* (Junger 1997) of crises surrounding anthropogenic climate change – in the economy, food, health, and energy – may transform western society enough to not only solve the immediate crises, but to bring its members the meaning, purpose, and community critical to finding happiness.

Throughout this dissertation we have used an alternative worldview – alternately referred to as indigenous, deep ecology, insurgent, minority tradition, bio-regional, and Gaia – as a foil to the core beliefs of the western worldview. While an absolute contrast between the dominant and alternative worldviews could be considered the very type of false choice criticized within this dissertation, it has been made deliberately to illustrate how the deep frames of the dominant western worldview construct crises, such as anthropogenic climate change, and how differently climate change – and its auxiliary crises – could be envisioned and addressed. This final chapter first better defines this alternative worldview. Secondly, it identifies the three deep frames which run through the Gaian worldview, highlighting areas where social change from the three deep western frames is more likely to occur, particularly where these changes better meet the universal quests of humankind defined in Chapter One. Finally, we will look at the discoursive bridges and institutional barriers to realizing this change.

A. Defining Gaia

While we have used the worldviews of deep ecologist and indigenous people at times interchangeably, and the former is inspired by the latter, it is important to distinguish between the normative daily experience of the two groups. Deep ecologists tend to be westerners, who have the luxury of romanticizing a natural world from which they have made themselves physi-

cally much safer. It is easier for this group to campaign for the protection of endangered animals, when these same animals are not threatening the physical safety of their own children, homes, and livestock (Büscher and Igoe 2013). Just as it is easier to argue for vegetarianism, when packaged tofu is available in a nearby grocery store, than when a subsistent indigenous lifestyle includes the hunting of local meat sources (Kingsolver 2008). Vegetarians argue against eating meat so as not to "hurt the animals", ignoring the obvious…that in nature nearly every wild animal's life ends in a violent and painful death in an endless quest for survival. Western followers of deep ecology tend towards a romanticized, anthropomorphic view of nature. "Nature" is often seen as a remote wilderness apart and safe from "civilization". This civilized life is then filled with safely domesticated pets, plush toys, books, and films filled with humanized animals, à la Lion King and Sesame Street. Many of the words used in the tenets of deep ecology reflect this romanticism, e.g., "harmony" with nature and "self-realization (though the use of) elegantly simple material needs" (Devall and Sessions 1985: 69).

By contrast, indigenous peoples typically live in very close physical contact with and are more immediately affected by their natural environments. For this reason, indigenous peoples harbor no western–like romantic notions of the natural world as a benevolent place. Because they are physically directly affected both by the violence and indifference of the natural world, they are more aware of how their own actions cyclically affect their own well–being. Many live subsistent existences, all too aware of the physical dangers of the natural world in the form of unpredictable weather events, predators, and disease. It could be said that "protecting the environment" has simply always been in indigenous communities' self–interest.

1. Bio–Diversity and The Right to a Clean Environment

The final declaration of the *Conference on the Human Environment* in Stockholm 1972[167] stated the common conviction that: "man has the fundamental right to freedom, equality, and adequate conditions of life, in *an environment of a quality that permits a life of dignity and well–being*, and he bears a solemn responsibility to protect and improve the environment for present and future generations" (United Nations Environmental Programme 1972: 2, *my emphasis*). Indigenous organizations, such as the Inuit Circumpolar Confer-

[167] The first worldwide meeting of states on the environment organized by the United Nations.

ence, interpret this declaration as a claim to a clean environment as a universal human right (Watt–Cloutier 2003). This right was confirmed in 2007 by the UN Resident Coordinator in China, Khalid Malik (2007).

This claim is important. While indigenous people have contributed very little to anthropogenic climate change, their normative lifestyle is hugely affected by it (Crate 2009, Dounias 2009, Gumbel 2007, Harris 2007, Marin 2009, Ulloa 2009[168]). Yet, they are not represented in the national negotiating bodies of the UNFCCC. Even within the inter–faith organizations collaborating on environmental issues (mentioned in Chapter Three and listed in Appendix D), indigenous people have little representation. These organizations are typically inter–Christian, inter–monotheistic, or at best inter–"all major religions," i.e., including eastern religions, such as Buddhism and Hinduism[169]. Even the Seven Year Plan created by the Alliance of Religions and Conservation (Colwell et al. 2008), to "help faith communities worldwide (deal with)… increasing destruction of the natural environment and climate change", effectively excludes indigenous groups, even though they are the most affected. Yet, indigenous people are critical to addressing climate change for two reasons. First, indigenous people live closer to natural cycles and can serve as early warning mechanisms for abnormal changes in climate (Crate 2009, Ulloa 2009). Moreover, indigenous societies normatively exemplify the sustainable lifestyle called for in many western nations to address climate change (Delaware North 2003, McDonough Architects 1992, McDonough & Braungart 2002,), as well as a range of auxiliary issues, such as the loss of bio-diversity.

As participants in the Earth Summit in Rio de Janeiro in 1992 declared: "indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices." Ethno–ecologists, who "explor(e) how human(kind) appropriate(s)…nature through a screen of beliefs and knowledge" (Toledo 2001: 336), see a clear link between indigenous peoples,

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[168] Even more research was represented during other poster sessions from Session 57 of the CLIMATE CHANGE: Global Risks, Challenges & Decisions: Cultures, Values and World Perspectives as Factors in Responding to Climate Change in Copenhagen from 10–12 March 2009

[169] The Council for a Parliament of the World's Religions (2008), which "seeks to promote inter–religious harmony, rather than unity," is the sole interfaith organization to date that truly embraces indigenous people as a core participant. A part of the parliament's vision expresses a belief that "the Earth and all life are cherished, protected, healed and restored."

cultural biodiversity, and biodiversity. Twelve *megadiversity* countries house the highest numbers of species and endemic species[170] (Mittermeier et al. 2001), and 90 percent of biodiversity lies within indigenous areas (Toledo 2001). As well, indigenous areas occupy a substantial share of the world's undisturbed tropical and boreal forests, mountains, grasslands, tundra, and desert, along with large areas of the world's coasts and near–shore waters (including mangroves and coral reefs (Durning 1993); 12 – 20 percent of which conservationists want to preserve in the future. However, this biodiversity can only be conserved if industrialized nations "maintain, reinforce or give control to the indigenous communities on their own territories and natural resources as well as sufficient access to information and technology, which give the communities both an economic incentive and a legal basis for stewardship" (Toledo 2001: 339). Ironically, because indigenous peoples have better safeguarded these last remaining bastions of biodiversity, they are increasingly under attack from supra–national corporations hunting for natural resources (Tauli–Corpuz 2006).

Understanding indigenous resiliency is critical for addressing climate change because, as Toledo (2001: 336) illustrates: "indigenous societies house a repertory of ecological knowledge which generally is local, collective, diachronic, and holistic." These communities minimize waste and maximize sustainability, exemplifying what the West now labels as a carbon neutral or low footprint lifestyle[171] (McDonough Architects 1992, McDonough & Braungart 2002). Other research has increasingly supported the link between biodiversity, poverty alleviation, (Djoghlaf 2008) and sustainable living (Sukhdev 2008). Instead of simply farming indigenous societies for their raw materials and specific medicinal knowledge and exporting universal notions, such as human rights, the West could learn from these sustainable communities. Indigenous societies are still strongly associated today with primitive living and cultural artifacts of the *exotic others* (Ashcroft et al. 1998: 85) discussed in Chapter One. Yet, there are valuable lessons indigenous societies can teach the modern world. The possibilities for learning were demonstrated during the development of a theater for the semi–autonomous Sápmi Park at the turn of the third millennium.

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[170] Brazil, Indonesia, Colombia, Australia, Mexico, Madagascar, Peru, China, Philippines, India, Ecuador, and Venezuela (Mittermeier et al. 1997: Table III)

[171] www.smartgrowth.org

2. A Sápmi Case Study

The Sámi[172] people of the very northern stretches of Norway, Sweden, Finland, and the Kola Peninsula of Russia, were persecuted for centuries by some of the most liberal western societies on Earth. Unfortunately, like many nomadic, indigenous tribes, the Sámi clashed with encroaching western nations built around the western principles of ownership and the exploitation of nature (discussed in Chapter Two). Nomadic use of land did not confer ownership of that land upon the nomads who depended upon it for their livelihoods (Smith 1995). Discriminatory laws were passed, such as the Land Act of 1902, stipulating that property could only be transferred to Norwegian citizens who could speak, read, and write Norwegian. The use of the yoik, a drum that traditional shamans used to speak to the spirits, was banned. From around 1850 onward, Norwegian was legislated as the official language in schools.

Nearly a century later, in compliance with the Human Rights Declaration of 1948, Norway was forced to acknowledge its state discrimination and began a broader discussion about real recognition for the Sámi as a protected minority and indigenous people. While Sámi was officially allowed to be taught as a secondary language in some school districts during the 1930s, in practice, it was banned in many Norwegian schools until well into the 1950s. As a learning language, Sámi was finally initiated in certain elementary schools in 1967. Since 1975, school districts with a mixed language basis are permitted to establish Sámi school districts at parental request, which provides an opportunity for the use of the Sámi language as a means of education, as well as instruction in the language itself. Basic materials about Sámi matters have now been added to the national curricula, and opportunities to learn the Sámi language are provided at a number of schools and colleges in northern Norway.

In 1953, at a conference in Jokkmokk, Sweden, official cooperation was established between the Sámi communities living in Sweden, Norway, Finland, and Russia. In 1956, this cooperation was solidified into a Nordic Sámi Council, which is now based in Karasjok, Norway. This council still liaises between the Norwegian, Swedish, and Finnish Sámi political groups as Sámi territories extend beyond – and precede – the national borders of

[172] The land is referred to Sápmi, while the people, language and customs are referred to Sámi (Saemieh in the Sámi language). They are also sometimes referred to as Laplanders, which is now considered derogatory.

Norway, Sweden, Finland, and Russia. Their transnational nature is enshrined in the Sámi political program of the Nordic Sámi Council: "We, the Sámi, are one people, and the national boundaries shall not break down the community of our people."

Today, over 70 percent of Sámi people live within the national borders of Norway, the only country with an indigenous Sámi population that has ratified the International Labour Organization (ILO) Convention No. 169 on Indigenous and Tribal Peoples in Independent States. When Article 110a was added to the Norwegian Constitution, "It (became) the responsibility of the authorities of the State to create conditions enabling the Sámi people to preserve and develop its language, culture, and way of life." By the early 1990s, the Norwegian government began to recognize that the Sámi were "a people whose cultural foundation is for a considerable part related to the traditional use of natural resources. They should therefore be able to claim under the Convention that their traditional forms of economic activities are to a certain extent also protected" (Smith 1995). They recognized they had an obligation to provide the Sámi people with a "material basis for their culture,… (including)… necessary utilization of natural resources and special considerations,…crucial for the safeguarding and development of the culture" (Borgos 2007). Unfortunately, though, while parties to the ILO convention must "safeguard the right of the peoples concerned to use lands not exclusively occupied by them, but to which they have traditionally had access for their subsistence and traditional activities"[173], the Norwegian government still does not provide the Sámi with full land and water rights. Instead, the government feels that providing the Sámi with access to state lands satisfies their obligations under the Convention.

In addition, decades of formal assimilation programs have left a legacy of issues. For instance, many Sámi still do not publicly acknowledge their ethnic identity, which makes it difficult to quantify the Sámi population today. It is estimated that there are around 75,000 Sámi, depending on the criteria used, e.g., genetic heritage, mother tongue, personal identification (Norwegian Ministry of Local Government and Regional Development 2003), with 40,000 – 50,000 of them living in Norway (International Helsinki Federation for Human Rights 2003). For official purposes, the Sámi Parliaments in Nordic countries have established their own criteria from a combination of subjective and objective factors. Secondly, since Norway was/is officially a

[173] www.ilo.org/ilolex/cgi–lex/convde.pl?C169

Christian country, many Sámi were forcibly converted during earlier Norwegianisation programs (General Synod of the Church of Norway 2002). Children are still taught *Christian Knowledge, Religious and Ethical Education* in school. According to one study commissioned by the World Commission on Protected Areas (2000), the shamanistic pagan religion of the Sámi "has been largely extinguished by conversion to Christianity".

Although officially–sanctioned discrimination is a thing of the past, informal conversations with Sámi of all ages indicate that the bigotry developed during the prior decades still exists today. Conversely, the renewed pride among the Sámi sometimes results in reverse discrimination against Sámi, whose parents denied their heritage in the past and tried to later return to the "homeland" without knowledge of Sámi language, customs, or societies.

As restitution for the centuries–long discrimination of the Sámi, the central Norwegian government began to transfer money and administrative power in 1993 to the Sámi Parliament for education, economic, and cultural development. These budgets are still administered in collaboration between Norwegian and Sámi ministries. Part of this money was used to build a Sámi Parliament, the Sámediggi, as well as a cultural visitor center in Karasjok, Norway. The sub polar location of Karasjok ensured this center only received visitors approximately 75 days a year. However, nearly all of the 50,000[174] international and domestic visitors passing by on a pilgrimage to North Cape[175] stop in Karasjok during this time period. In the Sápmi Park, visitors experienced all things Sápmi, including a recreated village, reindeer roast, and the expected handmade crafts. In many ways, the image of this center reinforced the view of many "modern world" visitors about the quaintness of pre–industrial life among indigenous peoples.

At the close of the last millennium, additional money was allocated to build a theater in this center, the Stálubákti. This theater was intended to tell the Sápmi story both to international and Norwegian visitors, as well as to younger Sápmi audiences, many of whom were rediscovering their roots. Most of all, it had to tell a story that the Sápmi felt both honored and represented them. Those individuals involved in developing the theater quickly realized that the theater was an opportunity to significantly change the im-

[174] Numbers provided by staff of the Sápmi Park: www.sapmi.no

[175] A steep cliff cape considered by many to be the northernmost point of Europe.

age of the Sápmi people and help reduce the bigotry that still existed.

A story developed which placed the Sápmi heritage in a broader world perspective and dug deeper than the typical indigenous–type story, art, and music. Instead of focusing on what made the Sápmi so anthropologically–unique, the story focused on what made them universally relevant to the modern world. Instead of preaching about the purity or righteousness of their traditional way of life, the story focused on how traditional values still played into an indigenous people embracing modern conveniences. On the surface, the story speaks primarily to the Sápmi, but visitors from all types of societies are drawn to the lessons of sustainable living, consensus, and community that can be learned. The Sápmi's most valuable lesson to the West, though, was their careful and thoughtful deliberation on the integration of ancient practices (reindeer hunting) with modern technology (helicopters and snowmobiles), while always considering what their elders would have thought and their children will have to bear. Unfortunately, this type of deliberation about whether a particular technology is consistent with beliefs and values is rarely seen in the West.

Many westerners look at the Sámi (and other indigenous peoples) and see their lifestyle as a quaint anthropological island in a sea of the more than seven billion people here on Earth. Yet, from the deliberation described above, westerners could learn to consider a longer time frame and a larger context for evaluating new technologies and stop developing some of the more extreme technical solutions, such as CCS, cloud seeding and GMOs. From their resilience in the face of massive assimilation efforts, westerners could question the wisdom of massive centralized systems – whether they be governance or energy – which sever local knowledge from decision making and control.

B. Deep Frames of Gaia

Devall and Sessions (1985: 69, *reordered*) articulated the key tenets of *deep ecology* (Næss 1973) as:

I. "Harmony with Nature
II. All nature has intrinsic worth/bio–species equality
III. Earth 'supplies' are limited
IV. Doing with just enough/recycling
V. Elegantly simple material needs…serving the larger goal of self–realization

VI. Appropriate technology; non-dominating science
VII. Minority tradition/bio-region"

If we strip out the more romanticized language, e.g., "harmony with nature" and "self-realization", the core tenets roughly reflect indigenous beliefs, which fall into three deep frames: Humankind as Inextricable, Nature as Enigmatic, and Bio-Region as Community. Humankind is seen as an inextricable part of a mysterious and immeasurable natural world, which holds humanity at its mercy. The long term impact of decisions and use of natural resources must be considered to ensure sustainability for future generations. Communities are sustained within unique, naturally-occurring bio-regions, which inextricably entwine food, economy, health, and society. In the following section, we look at these three deep frames vis-à-vis those of the western, dominant worldview defined in Chapters 3 and 4, as well as the universal quests of humankind identified in Chapter 1 to consider how community members might be motivated to change, reflecting the *motivational task* defined by Snow and Benford (1988).

1. Humankind as Inextricable

As we discussed in Chapter One, all of humankind struggles to answer the same timeless and transcendent universal mysteries of life: Who am I?, From where do I come?, What happens when I die?, What is my relationship to the world around me – the spiritual world, the social (human) world, the natural world? (Campbell 1959, 1988). In short, 'what is the meaning of life'? Worldviews are created as humankind searches for this meaning through purposeful engagement in conjunction with community and contact with the natural world. Yet, because nature is simply indifferent to human emotion, need, or ambition (Csíkszentmihályi 1990), people project their own meaning on to nature, which in turn reflects the worldview they have constructed. As we experience nature, we begin to form expectations of nature. Thus, our worldview is iteratively constructed. As Kelly (1955: 3) explains:

> "whatever nature may be, or howsoever the quest for truth will turn out in the end, the events we face today are subject to as great a variety of construction as our wits will enable us to contrive… even the most obvious occurrences of everyday life might appear utterly transformed if we were inventive enough to construe them differently."

Within the western, dominant worldview, we believe in cause and effect, order and logic, i.e., that what we do "matters". If we do "X", "Y" will happen. Thus, we project a particular kind of meaning, which creates a semblance of control. This flows throughout both the religious side of the dominant worldview, with its beliefs in Earth stewardship, prayers that affect change, sinning and damnation, and redemption through acts, as well as through the scientific side with its objective study of causation and classification, climate modeling and projections, and careful delineation between levels of probability. To a certain point, this desperate need to matter and control is a natural human impulse; we wish to reject fatalism in the face of an indifferent nature. Yet, the illusion of control in the West has led us to the climatic issues we face today. In part, it has fed the idea of humankind as a separate and unique being who has been placed on Earth to "steward" the rest of Earth. This separation, in turn, allows to categorize, label, value, buy, and sell extricable "pieces of Earth". Calls for "Saving the Planet" are a quintessential reflection of this thinking. The idea that the planet will somehow cease to exist if we continue along a path of environmental destruction denies millions of years of evolutionary evidence that it is humankind, as a species, that may cease to exist as the planet evolves based on both anthropogenic and natural forces. The "planet" will continue, even if vastly altered from the one humankind inhabited.

In the Gaian worldview, humankind is inextricability woven into the natural world as a "productive (re)source,…center of the universe, the core of culture and the origin of ethnic identity" (Toledo 2001: 336). The spiritual world is embedded in nature, not located in a heaven outside of nature. Time is polychronic: where past, present, and future cannot be separated in decision making (Hall 1979). Bate (2000: 2–3, *paraphrased*) identified a nostalgia in the persistent popularity of western romantic literature for a time when people lived in better synchronization with natural cycles.

2. Nature as Enigmatic

Closely tied to the view that humankind is inextricable from nature is a humble – perhaps fatalistic –acknowledgement that nature is simply too enigmatic to be controlled. This is not to say that indigenous people accept nature's indifference for, they, too, project their own meaning on to nature and pray to the spiritual world to affect changes. However, when the spiritual world is embedded in the natural world, western notions of separate-

ness, ownership, rights, and standardization[176] are simply not compatible and any use of technology must be balanced with the needs of the generations before and to come.

One of the central tenets of the deep ecology worldview is *bio–species equality*, the belief that nature has intrinsic value (Sukhdev 2008), as opposed to the western view that regards *nature as free* (Hajer 1996). There is a growing recognition even within industrialized nations that Earth*'s supplies are limited* to support world population[177], another key tenet of the deep ecology worldview. The World Wildlife Fund (2006: 4) offers the term *biocapacity,* "the amount of biologically productive area — cropland, pasture, forest, and fisheries — that is available to meet humanity's needs." Proponents of *global environmental space* (Bührs 2007) claim there is a limit to Earth's resources and the use by any one person or state should be limited to whatever is fair, i.e., equitable access for everyone, responsible and renewable, so as to neither diminish nor damage the quality or supply for future generations. The natural world is a closed system of unknowably complex interactions with limited resources and no one person or group should take more than is needed to survive.

Decades of dealing with environmental problems through a centralized, technology–oriented *ecological modernization* (Hajer 1996) framework have fed western arrogance that humankind could out–design nature. Yet, while the western public seems surprised when mighty rivers overwhelm the dams, earthquakes occur without warning, and wildfires burn out of control, westerners have never quite eliminated their millennia–old fears of an uncontrollable nature (Hudson 1993, Redford & Sanjayan 2013). Perhaps it is time to rethink our combative stance towards the natural world. For nature – in some form – will ultimately survive whatever destruction we wage; it is the human species that may not. We may continue to study the natural world, and even categorize what we find, but we should not superficially quantify it, trade it, nor pretend to be able to control it.

3. Bio-Regional Communities

Bioregionalist communities are created around naturally-occurring ecosystems, instead of arbitrary human borders. This scale fosters community par-

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[176] this, and the notions of time mentioned in the previous section, are discussed in more detail in Chapter Two, Section B.2

[177] Haub (2003) and the World Bank (2011) provide population data.

ticipation and the members of that community will both hear and actively protect this ecosystem, maintaining a locally and community–oriented, sustainable way of life (Berg & Dasmann 1977, Berry 1993, 2001, 2005, McKibben 1989, 1995, 2007, Taylor 2000). Bioregionalism is both a tenet of deep ecology and a political philosophy in its own right, which merges the tenets of primal, pagan spiritualities (Taylor 2001a: 183) with the ecological philosophy of deep ecology and a regional, ecosystem scale of decision making and community (Taylor 2000). This bio-regional orientation shrinks the feedback loop between action and reaction and ensures that its citizens will protect their ecosystem. For instance, communities would be less likely to favor chemical fertilizers and mountaintop blasting to source their own food and energy if they also had to drink from the rivers that these practices poisoned. These kinds of environmentally destructive behaviors would be even less likely if those rivers and mountains were respected as bio-equals and/or revered as sacred. Westerners live too far from the results of their own actions to realize how they are polluting their own nest. This idea of caring for our nest is a largely unrecognized tenet of the locavore movement, which I briefly described in the Introduction. The smaller the scale of economy, food, health, and society, the closer the feedback loop of inter–related cause and effect. And, in contrast to the centralized decision making and punitive justice systems favored in the West[178], bio-regionalism favors a more local, deliberative democratic model, which focuses more on communal rights and restorative justice.

These are, of course, not new ideas. Since the evolution of humankind, communities have been built upon the inextricable relationship between the spiritual, natural, social, and individual dimensions of human life (Campbell 1949, 1959, 1988, Walter 2007, White 1967). The western worldview, which artificially separates and objectifies these dimensions, is the most extreme exception. Western notions of individualism and the pursuit of happiness through material wealth have broken the spirit of local-scale community and mutual responsibility between people and community in the United States (Clark 2002, Kasser & Ryan 1993, 1996, Niemiec et al. 2009, Sheldon et al. 2004). The centralization and standardization favored in the western worldview severed the feedback loop between local geography, season, and people. With the globalization of information, culture, and commerce, our homes, our food, and our lifestyles became more homogenous, out of sync with season and place (Pollan 2006, 2008, Schlosser 2001).

[178] this is discussed in more detail in Chapter Two, Sections B.5 and B.6.

Sachs (1999) argues against high–speed trains and budget airlines for the very reason that they de–synchronize us from the natural world. As the chasm between where we are and how we live widened, so did our environmental and social problems worsen. The strength and growth of the bioregional movement in the West is a multi–faceted response to multiple crises – including the economic one – but it is, at its heart, a return to ancient impulses for meaning, purpose, and community.

Making a shift in scale cannot be done through the centralized policy instruments and technology so favored in the West. It requires the bio-regionalists' idea of *reinhabitation*, wherein formerly exploitative people relearn how to become members of a unique *biotic community*; learning to *live-in-place* (Berg & Dasmann 1977: 218, 217). Living in place means de–mobilizing the western lifestyle and returning to regional[179] or *local economic* (Berry 2001) orientation. In other words, we must relearn how to live within locally–sourced resources (Hopkins 2008), which includes seasonal eating, local energy sources, and much less high speed transportation of goods and people[180].

These efforts require *vitally engaging* the unique, individual talents – or *character strengths* (Seligman et al. 2005) – of each community member to (re)build healthy, self-sustaining communities, which are, themselves, uniquely shaped by the natural world surrounding it. For, as Haidt (2006) found, only vital engagement that involved physical, visceral contact with wild nature triggered the neurological impulse associated with action. Yet, most environmental campaigns focus on natural imagery, not a local, vis-

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[179] One popular delineation of "regional-scale" is the 100-Mile Diet movement (Kingsolver 2008, Smith & Mackinnon 2007), whereby supporters pledge to not to anything not grown within 100 miles of where they live: http://100milediet.org/. Others have argued the scale should be a 250 mile radius Nabhan (2001). Bioregionalists could argue that the regional limitation would vary depending upon the size of the ecosystem in question.

[180] The United Nations has specifically identified transportation, and aviation in particular, as the fastest growing cause of climate change. "By 2050 it will account for more than 15 percent of world wide CO2 levels…aviation is one of the single largest threats to climate stability, and consequently to life on earth" (Garman 2006). Monbiot (2006) argues that: "(since) there is no technofix to the disastrous impact of air travel on the environment, the only answer is to ground most of the aeroplanes flying today." Although the aviation industry had avoided requirements to reduce its GHG emissions through heavy lobbying, the European Commission voted in late 2008 to include both the aviation and shipping industries in emission reduction targets (BBC 2008b, Kanter 2008).

ceral connection to the natural world[181]. Because local geography varies so dramatically between regions, there is no one-size-fits all solution to environmental challenges, such as climate change. This flies in the face of a western worldview, which prizes massive, standardized, centralized policy, and technical solutions and dismissing individual effort as inadequate. The apathy described earlier in this chapter is not based on self-centeredness, but on feelings of powerlessness that individual efforts are inconsequential to addressing environmental crises (Chiras 2010: 552). Lack of action by individuals is not caused by apathy; apathy is caused by inaction, and inaction is fueled by the recurring message that individual effort doesn't make a difference. The message that individual efforts cannot have a consequential impact is driven out of a One World Market *überframe*, which prefers global, centralized policy and technology. To support this dominant social paradigm, local, decentralized campaigns of millions of individual efforts are marginalized as irrelevant.

C. Gaia and The Pursuit of Happiness

Gaian worldviews are often marginalized as either an alternative lifestyle of hippies, drugs, and free love (Taylor 2001a) or that of abstention and sacrifice in which westerners are beseeched to give up the things they love and return to a more primitive life in order to "save the Earth." This marginalization relies upon the kind of anti–social, *universal stereotypes* (LeVine & Campbell 1971/1972) discussed in Chapter One. Discrediting critics through these stereotypical images narrows the range of possible solutions to the dominant advantage. As part of the universalization and institutionalization of the western worldview described in Chapter Two, dissenters, such as the movements against globalization and genetically modified food (Bauman 1998, Hawken 2007, Klein 2007, Mander & Tauli–Corpuz 2006, Shiva 1993, Stiglitz 2002), are marginalized in the western *discourse–coalition* (Hajer 2006: 70) as "sentimental, illogical, and naïve" (Soros 1998), elitist and cultural relativist, and/or dismissed as working against some natural progression of humankind's development (Burke 1966, Cox 2010, Hajer 2006, Hall 1979). Policies countering global capitalism are framed negatively. For example, protestors against global capitalism during the 1999 WTO

[181] Photo exhibitions of nature, such as Camille Seaman's *The Last Iceberg* (http://camille-seaman.com/Artist.asp?ArtistID=3258&AKey=WX679BJN&ajx=1#!P11192_I1_246734) and Steve Bloom's *Spirit of the Wild: (*https://www.stevebloomshop.com/acatalog/Exhibitions-.html*)* seek to juxtapose the might and beauty of nature with their fragility. Yet, while these types of photos may increase the emotional bond of the viewer, they will not likely provoke them into action.

meeting in Seattle were dismissed as "a Noah's ark of flat–earth advocates, protectionist trade unions and yuppies looking for their 1960s fix" who were "*blocking* or *erect(ing) walls* against trade, *choking* globalization" (Friedman 1999)[182].

Ironically, the dominant western–constructed, but universalized worldview, actually deprives humankind of happiness, while the marginalized Gaia worldview increases it (Kasser & Ryan 1993, 1996, Niemiec et al. 2009, Sheldon et al. 2004). This is because its key tenets fulfill the universal quests of humankind discussed in Chapter One – our quests for meaning (Campbell 1949, Tilly 2006), purpose (Csíkszentmihályi 1990), community (Haidt 2006, Maiteny 2000, Seligman et al. 2005), and contact with nature (Næss 1973, Weinstein et al. 2009, Wilson 1984). Those who strive to fulfill these quests have been found to maintain more socially and environmentally sustainable lives (Kasser 2009, McKibben 2007). In contrast, psychologists (Kasser & Ryan 1993, 1996, Sheldon et al. 2004) have found that chasing the American Dream embodied by the institutionalized western lifestyle lies at the root of many of the United States' current social problems.

Research from several different academic disciplines on indicators of human happiness found a direct correlation between sustainability and happiness, and, conversely, between materialistic values and a larger ecological footprint (Kasser 2009, Niemiec et al. 2009). Sylvester–Bradley (2004) found that maximizing consumption does not lead to well being. Chaplin and Roedder John (2007) found a direct link between low self esteem and materialism, i.e. those with higher self–esteem consume less, while those with low self–esteem consume more. Those who hold more individualistic and materialistic values also tend to be more ecologically destructive. On the other hand, the World Values Survey[183] found that Puerto Rico and Colombia – while not economically wealthy – are the second and third happiest countries in world. Wealth beyond a basic standard of living — about £10,000 a year (Rudin 2006) — shows no direct correlation to happiness. In fact, Easterlin (1995, 2010) found that while the western standard of living had increased dramatically, happiness in some cases slightly diminished.

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[182] Hawken (1993a) disagrees, "They were organized, educated, and determined. They were human rights activists, labour activists, indigenous people, people of faith, steel workers, and farmers. They were forest activists, environmentalists, social justice workers, students, and teachers…They were speaking on behalf of a world that has not been made better by globalization".

[183] www.worldvaluessurvey.org

Inglehart et al. (2008: 276, *paraphrased*) link democracy, political freedom, equality, and tolerance with happiness. However, they conclude that the correlation between economic development and happiness follows a *curve of diminishing returns*. In other words, once a foundation of economic security is achieved –perhaps linked to the fulfillment of basic needs as defined in Maslow's (1954) hierarchy – initial *subjective well being* (SWB) peaks. Further economic growth doesn't buy additional happiness. In quantitative study on national SWB across the world, Inglehart et al. found that "economic development, democratization, and increasingly tolerant societies have contributed to a growing sense of freedom and control,…(and)…a rising sense of free choice is by far the most powerful factor driving rising SWB" (p. 273), and concluded that "happiness is shaped by social and psychological factors at least as much as it is by economic…ones" (p. 274). The Happy Planet Index (New Economics Foundation 2008) rated the U.S. the 150th happiest nation out of 178 countries (about the same level as the Ivory Coast, Rwanda, or Sierra Leone), based on how ecologically efficient nations provide for the well–being of their citizens. In the U.S., American Environics (2006) has found decreased economic well–being, increased focus on pure survival, and a rise in political polarization. In the same period, however, the strong safety nets of Western Europe and Canada allowed its citizens to focus on fulfillment, i.e., self–actualization, the highest need defined by Maslow (1954).

Western nations focus on Gross National Product (GNP) as a measure of health. Yet, Lorde (1978) notes that: "any system which defines the good in terms of profit rather than in terms of human need… robs our work of… fulfillment." In contrast, psychologists (Inglehart et al. 2008) and economists (Easterlin 2010) encourage policymakers to use indicators other than GNP, such as the Happy Planet Index or Gross National Happiness[184] index first touted by Bhutan (Brooks 2008) [185]. What's the purpose of an economy, they ask, if not to enhance the well–being of its citizenry? Insecurity fosters a materialistic approach to life. Policies that combat insecurity — universal healthcare, say, or good, affordable education — promote happiness. Yet, consumption is still too often promoted in the West for happiness and meaning (Seligman et al. 2005). Following the terrorist attacks on New York City and the U.S. Pentagon on 11 September 2001, most U.S. Americans

[184] http://www.grossnationalhappiness.com/

[185] Although often held up as a model for happiness economics, Bhutan has been widely criticized for its expulsion of thousands of its Nepalese minority.

were prepared to make material sacrifices to prevent another attack. Unfortunately, instead of calling for a reduction in arms proliferation and oil usage or for an increase in diplomacy and personal reflection, Americans were encouraged to go shopping to show the terrorists they would not beat the American public by changing their (consuming) lifestyle. Shopping became the highest form of patriotism (Bush 2001). This was in sharp contrast to the patriotic calls for rationing and "victory gardens"[186] (Pollen 2009a) during World Wars I and II.

Evidence of the dissonance between our western lifestyle and happiness has been building out of all three main domains of academia – the natural sciences (Clark 2002, de Waal 2005, Wilson 1978, 1984, 1999), the social sciences (Deci & Ryan 2000, Dobson 2004, Haidt 2006, Inglehart et 2008, Kasser & Ryan 1993, 1996, Næss 1973, Nakamura & Csíkszentmihályi 2002, Niemiec et al. 2009, Pinker 2008, Seligman et al. 2005, Sheldon et al. 2004, Tilly 2006), and the humanities (Bate 2000, Campbell 1949, 1988, Taylor 2001a, 2001b, White 1967), as well as academic research, which bridges these domains (Berry 1993, 2001, 2005, Cox 2010, Cramer 1998, Hulme 2009). While these researchers do not all use the same terminology nor methodology, nor do many seem to share their findings much outside their own discipline, they support a basic notion that the western lifestyle does not reflect with the way in which we have evolved to thrive – biologically, psychologically, or socially. This dissonance has led, not only to our current set of environmental and social woes, but to growing social awareness that something is just not right. As leaders emerge who can articulate the *envisioned gap* between the current state of affairs and a future alternative state, sociologists (Thye & Lawler 2006) have found that members of western societies are likely to adopt proactive and innovative measures to realize this envisioned state as quickly as possible, bringing about the societal change necessary to address climate change.

D. Bridges and Barriers to Transformative Change

Academic research is largely focused on analyzing what has already happened, only making the most careful of predictions for the future based on observable trends. While prediction is fraught with danger in even the most exact of sciences (just ask any weather forecaster), prediction of social or cultural change is nearly impossible. Yet, Snow and Benford's final *prognos-*

[186] When the war ended in 1945, "home gardeners were producing 40 percent of the United States' produce" (Pollan 2009a: 1).

tic task demands we try to articulate a solution and strategy to affect the transformative changes we have described herein. While we could simply re-list the contrasting main tenets of the dominant and insurgent worldview (Cramer 1998: 8, Devall & Sessions 1985: 69, Næss 1973) and draw continuums between them, it is difficult to extract an individual idea and describe possible changes without also describing changes in the other tenets as well; the ideas are simply too intertwined. Therefore, we will speak, not in continuums of absolute opposites, but identify areas within the three deep western frames where social change is more likely to occur. While cultural relativists may claim that the gulf between these two worldviews is too wide to bridge, in Chapter One we discovered that the differences between worldviews lie in the culturally relative stories each constructs, not in the universal questions these stories seek to answer. We will look for stories – or discoursive metaphors – which bridge these differences. Explaining "why" is shared among humankind, not the specific "how" or "what" (Campbell 1949, 1988, Tilly 2006).

1. Humankind: Benevolent Steward or Inextricable Participant?

At the moment, there are observable shifts in western thinking towards seeing humankind as an inextricable part of the natural world. This is not to say that this will eliminate the view of ourselves as benevolent stewards put on this planet to guide and manage it; however, the two are not necessarily mutually exclusive. White (1967) argues that a strong, mystical connection with nature has a distinct tradition within Christianity, and Maslow (1964 (1994): 25) makes a distinction between the "mystics" (those who privately seek mystical, peak experiences) and the "legalists" (those who value centralized structure and organizations and literal interpretation over metaphorical meaning). Mystics, such as St. Francis, are found in all religions, and Christian mystics may prove to be a valuable link in any western realignment toward Gaia. One side note of interest is that Saint Francis is also the patron saint to San Francisco, arguably the heart of the environmental movement in the United States. While reiterating the traditional view that nature was a gift from the Creator, the new Catholic Pope, named for St. Francis himself, also recently said:

> "interventions (may be made) on nature…(if they are)…performed responsibly,…*acknowledging the "grammar" inscribed in nature* and by *wisely using resources for the benefit of all,* with respect for the beauty, finality and *usefulness* of every living being and its place in the ecosystem. Nature…(is) a gracious gift which we

must care for and set at the service of our brothers and sisters, *including future generations*" (Pope Francis 2014, *my emphases*)

This statement powerfully supports the Gaian notions of polychromatic decision making, science and technology intervening only with careful deliberation, simple material needs, and natural rights. Besides the more traditional faiths, nature–based spirituality is thriving around the world (Taylor 2001 a: 175). It is provoking *environmental myth–making* (Taylor 2001b: 228), in echo of Campbell's (1988: 41) prediction a decade prior that future myths would revolve around a common concern for the planet upon which we all depend. This myth making doesn't require a religious conversion. The Alliance of Religions and Conservation (2008: 26–28) argue that every religion has existing customs within which a deeper environmental message could be entwined. In particular, spiritual rituals throughout the ages and across the world have relied on music and the arts – and humankind's emotional and physical responses to them (Farnsworth 1969, Sloboda 1991) – to enhance these festivals, customs, and traditions.

To see how this shift might be encouraged at a societal level, we turn again to Haidt's (2006) findings discussed in Chapter One on human neurological response to various types of contact with nature. While exposure to visual images of the natural world triggered oxytocin, the neurotransmitter associated with bonding and "elevation" in the human brain, only *vital engagement* triggered the neurological impulse associated with action. This finding is backed by Maiteny's (2000: 248, *my emphasis*) interdisciplinary research on influencers and predictors of positive environmental behavior:

> "Only behavioural change that is meaningful to the individual will itself be sustainable in the long term. The more it promises to satisfy the inner existential yearnings, the more meaningful it will be. And the less satisfaction of the yearnings is believed to result from consumption of physical resources, the more ecologically sustainable it will be."

Personal experiences in nature – especially those activities, which vitally engage us – clearly have the ability to reshape environmental behavior. According to Robin Moore, an expert on the design of environments for children, "natural spaces and materials provide stimulation for children's limitless imaginations and serve as the medium of inventiveness and creativity" (Louv 2007: 5). Louv found that children played more creatively,

cooperatively, and displayed longer attention spans with direct experiences within nature. He points to studies (Moore & Wong 1997, Moore & Cosco 2007), which demonstrate "time in natural settings significantly reduces symptoms of attention–deficit (hyperactivity) disorder…and helps reduce negative stress and protects psychological well being, especially in children undergoing the most stressful life events." The Convention on the Rights of the Child (United Nations Committee on the Rights of the Child 1989: Article 31) states: "States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts."

More recent studies have found that engagement in *wild nature*[187] before the age of eleven[188] has a "significant, positive association with both adult environmental attitudes and behaviors" (Wells & Lekies 2006: 13). Their research emphasizes the importance of early exposure to wild nature and unstructured play, which "allow(s) for extensive, spontaneous engagement with nature" (p. 14). Yet, children living in the United States today spend about one percent of unstructured time outdoors each week and 27 percent of their time watching television (Hofferth & Sandberg 2001). The American Academy of Pediatrics has even recommended vitamin D supplements for children (Associated Press 2008), something unnecessary with basic exposure to the sun[189]. Moore (1997) outlines the many societal causes and negative effects of this lack of outside play time. Policy initiatives, such as the No Child Left Inside[190] initiative developed by Richard Louv (2007), could reverse this trend and promote more responsible environmental behavior of future generations. Given that nearly two-thirds of Americans in their twenties believe climate change is happening, stricter environmental laws are worth the cost, and more than eighty percent see the answers in the truly renewable sources of solar, wind and water (hydrogen technology) (Pew Research Center 2011), it seems we are already on that path.

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[187] Indicated as walking, playing, or hiking in natural areas, camping, hunting, and fishing.

[188] Child development around the age of eleven reoccurs in many field of research as a critically influential time in the development of deep beliefs. Not coincidentally, this is also the target age of most novels and movies based on the heroes journey.

[189] In all but the Arctic and Antarctic longitudes, although in inhabited Arctic regions, fish high in Vitamin D is a staple of the indigenous diet.

[190] www.nochildleftinside.org

2. Nature: Controllable Object or Enigmatic Force?

While there are some noticeable shifts in the prior deep frame, the second shift – from nature as controllable object to enigmatic force – is more problematic for two primary reasons. Making this shift would require westerners to acknowledge their lack of control over the natural world, which would undermine the illusion of safety underpinning the Western worldview discussed in Chapter 3. Pollan (2009b) postulates that part of the reason anthropogenic climate change scares westerners so much is because it will likely force them to do many tasks for themselves, which they have become accustomed to outsourcing. Yet, increasing numbers of Americans are relearning self–efficiency – in the form of cooking, gardening (Kingsolver 2008, Pollan 2009a), knitting (Thakkar 2008, Wills 2007), and bartering – and supporting local businesses, tradesmen, and farms. For instance, 19% more Americans planned to grow their own food in 2009 than in the prior year, and seeds sales increased 30 percent in the same time period (Reuters 2009b).

Secondly, recognizing the complexity and interdependencies within world's environmental systems would also necessarily acknowledge that damage done to one caused damage to another and require restitution for the damage this legacy of control has wrought. The West would have to accept its historical responsibility for climate change and embrace the principles of *ecological citizenship* (Dobson 2004) and *deliberative justice* (Müller 2002a, b, Müller et al. 2007) discussed in Chapter Three. Shifting the discourse from 'benevolent aid' towards 'compensation for damages' would eliminate the superior western perspective of the rest of the world as a cheap resource and easy market, essentially creating an equity that is virtually non–existent today. This obligation would also put other less culpable groups in charge of climate change negotiations. No longer would the western world define whether solutions were politically viable, allowing the richer possibilities of the middle, recommended by both Derrida (Rojas 1997) and Fellman (1998), would be given space to be considered. For this to happen, we would also have to acknowledge the dangers of private sector influence, which have been highlighted throughout this dissertation – the tendency toward oligarchy, the loss of food security and economic independence, as well as the negative effects of cultural imperialism – and reject the notion of *corporate colonialism* (Korton 1995) that every public service is a business. This would move the parameters of climate change negotiations back into the public forum and nurture public policies based on the public good, as opposed to economic growth and profiteering, and facilitate the development of more

de–centralized and local solutions. This will not happen through some kind of self–awakening or revolution within the private sector. Private sector actors will always respond to their inherent pressures for profit and growth. True innovation out of the private sector is beneficial when this is understood, instead of expecting private actors to operate counter to these pressures and solve public problems. Public sector actors are best suited to setting clear parameters around public issues and working to solve them.

However desirable this may seem, though, it is highly unlikely that the U.S. and other western powers will voluntarily relinquish the power it holds over most of the world policy making and financial systems. Instead, a smaller step could be accomplished by citizens of those countries demanding accountability, voluntarily reducing their own consumption and truly becoming ethical consumers (Crane & Matten 2007).

In addition, returning decision making power to those in the public and civil sectors could be accomplished in two phases: first, by strengthening public financing of – and eliminating or reducing corporate contribution to – all political campaigns and anti–competition enforcement and second, by eliminating the corporate personhood discussed in Chapter Two. These steps would eliminate private sector involvement in public policy negotiations and place citizen welfare back into the public sector. Yet, both of these ideas are unlikely to happen in the current political atmosphere of the United States. In 2010 the United States Supreme Court ruled that: "political spending is a form of protected speech under the First Amendment, and the government may not keep corporations or unions from spending money to support or denounce individual candidates in elections unlimited campaign financing by corporations". This ruling was predicated on corporations (and unions) as *jural person* with constitutional rights. Many opponents of the Citizens United decision - and the ensuing flood of undisclosed money into the 2010, 2012 and 2014 elections - believe that a constitutional amendment which clearly limits the definition of personhood to people as the only real way to reduce private sector influence on public policy, e.g., Free Speech For People. Yet, some legal scholars argue for enforcement of the full extent of constitutional rights and responsibilities of corporations to ensure more responsible election funding (Greenfield 2014). These scholars point to the "codetermined" board structures, which include both shareholder and employee representatives, more commonly found in Europe as models for both financial growth and corporate responsibility.

While such a realignment between the private and public sectors will take strong and perhaps initially awkward steps in the United States, over time a less influential and strongly managed private sector could be seen as normal by future generations. Of course, some proponents of the free market capitalism outlined in Chapter Two will claim that this kind of regulation of the private sector would strangle innovation and ultimately destroy competition. Instead, this harnessing would discourage oligarchy and allow smaller, innovative organizations to flourish.

3. Scale: Global Market or Bio-Regional Community?

This last deep frame is perhaps the most complex for it encompasses the very question of how we define community. We have seen in prior sections why we are increasingly motivated to connect to a smaller scale of community for meaning and purpose. Ultimately, communities are defined by those who assume its cultural identity with its culture, which we learned in Chapter One is mutually and iteratively constructed through communication and experience in the physical geography. The spread of modernity, together with the global trend of mixing religion, politics, and the manipulation of mass media, has created an anxiety, which increases the need for an authentic cultural identity, a way to feel special (Hamelink 2006b). Too often a divisive religious identity provides the veneer of authenticity, which only reinforces a feeling of superiority and entitlement over inferior "others". Yet, what if this authenticity was derived from identifying as a member of the truly unique place in which each community inhabited?

Each culture is appropriated differently by each individual member, and throughout any individuals' life, the salience of each identity is dependent upon the situation at hand. Some identities may remain in the background our entire lives, only to spring forward in sudden importance upon changing circumstances. If we are to relearn how to become members of unique *biotic communities*, we must write new stories to increase the salience of the "bio-regional citizen identity" for those members. At a national level Hershfield et al. (2014) found a direct relationship between the willingness to invest in the environment and citizens' beliefs that their country has a long future ahead, which, in turn, is directly tied to a perceived historical past. This engagement of history in the discourse of promoting environmental actions would connect citizens to future generations. Messages of hope for the future provoke longer term and more permanent societal action. If the scale of economies – including environmental planning – was on a bio-regional level, this principle would likely still apply. Not only would commu-

nity avoid all practices that would directly affect their own quality of life, they would consider the quality of life for future generations, i.e., the seven generation rule.

Currently, though, the general public is often perceived as apathetic and unwilling to engage in meaningful behavior change to address environmental crises. Williams (2002: 500) blames this apparent apathy on *environmental crisis fatigue*, the skepticism and weariness of a population jaded by a perpetual string of warnings of imminent catastrophic, yet averted, dangers of *environmental emblems* throughout the 20th century[191]. This perceived apathy has, in turn, been translated by public policy makers as an unwillingness to take threats seriously and a selfishness to change their own behavior. The former chairman of the U.S. House of Representatives Energy and Commerce Committee, John Dingell, represented the "automotive" state of Michigan for the Democratic Party, which is seen as more willing to address the climate change crisis (Earth Day Network 2006). Dingell was so certain that the public was not willing to sacrifice their own lifestyle in order to address climate change that he threatened to introduce a huge carbon tax, just so it could be defeated (Andrews 2007).

However, while humankind can respond to fear and crisis with chaos, myopia, or denial (van Ginneken 2003), collectively, individual fears can be collectively channeled into social change. For example, in one poll by the National Institute for Public Health and the Environment in the Netherlands (*Rijks Instituut voor Volsgezondheid en Milieu* 2004) 70 percent of Dutch citizens saw climate crisis as a social dilemma, expected the government to organize a response, and were prepared to adjust their own behavior as long as others around them did as well. This community–oriented approach is backed by Weber (2006) and Milch et al. (2009), who found that long–term, benefit–oriented behavioral changes were best realized when decisions were made as a group because community settings and common benefits were considered before individual costs.

At a practical level, shifting our scale of community could be greatly aided by a carbon tax, especially one which reflected *full social costing* (Stern 2006, e.g., Wasley 2009), i.e., when the cost of a product includes all *cradle to grave* (McDonough & Braungart 2002) social and environmental costs incurred from the moment of creation to the moment of disposal. This full social cost-

[191] reminiscent of the ancient fable of The Boy Who Cried Wolf.

ing may be just the short-term tool needed to re-sync the western world with its bio-regional ecosystem. If apples from South America and roses from Kenya included their full social costing, they would become prohibitively expensive for the western consumers they currently supply[192], and a volcanic eruption in Iceland would not force Africans farmers to destroy their crops because they were destined for northern European palates and not their own (Gettleman 2010, Miller 2010, Wadhams 2010). In a significant step towards this full costing, European oil and gas giants recently petitioned the world governments negotiating a climate pact for just such a carbon tax as a way of addressing the "critical (world) challenge" of climate change. They appealed for "clear, stable, long-term, ambitious policy frameworks…(to) reduce uncertainty and help stimulate investments in the right low carbon technologies and the right resources at the right pace." (United Nations Framework Convention on Climate Change 2015).

In the political polarization of the United States, discussed in Chapter One, the debate on food has become politicized. Vested interests in the current One World Market global food system frame local food movements as elitist[193] and insufficient to solve global problems[194]. However, this drive for community building and greater self–sufficiency crosses political lines (Holleman 2010, McKibben 2010, Moskin 2010) by joining up the anti–globalization groups in the liberal camp, who distrust distant global corporations, and the libertarian side of the conservative camp, who prize local self–sufficiency and distrust global organizations (as discussed in Chapter Four).

Furthermore, this local food movement is part of the larger global and social justice movement (Hawken 2007: 191), which includes more than a million local, regional and global organizations, working at different scales in forty-six different areas of interest, ranging from agriculture, climate change, and

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[192] Some dispute this argument, saying that roses (and produce) grown in European greenhouses emit more GHGs than flying it in from Africa (Foster 2007). However, the question is not where northern Europe should get its roses from in the middle of the winter, but why northern Europeans believe it their right to have roses in the middle of winter. What local, seasonal idea could be substituted instead? Or, should we just move Valentine's Day to June when roses are locally available?

[193] Illustrative example: http://www.sfgate.com/cgi–bin/article.cgi?file=/c/a/2010/05/02/MNQK1D7FND.DTL

[194] Illustrative example: http://www.timesonline.co.uk/tol/news/science/earth–environment/article6985295.ece#cid

food to indigenous, women, senior, children, and workers' rights to biodiversity, media, and cultural diversity (pp. 194-302). Many of these organizations overlap several of these categories, but the common thread between them is collaboration on social justice, indigenous rights, and environmental stewardship, i.e., a reclamation of community and connection to the natural world. Hawken sees this decentralized, uncoordinated, yet collectively powerful movement as a direct response to the current global social and environmental crises, which have arisen out of the dominant western worldview. The inability of the dominant social paradigm to solve these crises is catalyzing this movement, a movement which seeks to return us to a way of life in which humankind can find meaning through vital engagement in community and the natural world. As Hulme (2009: 353) explained: "climate change is an idea around which…concerns for social and environmental justice can be mobilized,…a new category of justice – climate justice – is demanded, (which) attaches itself easily to other long–standing global justice concerns." What makes all of the academic work noted above truly interesting, though, is the massive growth of the global social and environmental justice movement identified by Hawken (2007); the movement of movements (Klein 2002: 458), which seeks to address this same dissonance. In other words, not only is academic knowledge (albeit unconnected) increasingly understanding why our current system is not working, but social activists are gaining momentum to change it.

Reducing the scale of community and decision making to a bio-region motivate citizens to care for their "nest" because, at this scale, it is comprehensible. In a study on the commercial use of linguistic repertoires, Ereaut and Segnit (2006) concluded that the chief problem with current environmental campaigns was the juxtaposition between a massive, somewhat abstract, worldwide crisis and the relatively inconsequential impact any individual could make through their own efforts. In contrast, individual efforts at a definable community level feel more concrete and impactful.

> "Instead of constructing the climate change problem as an epic battle, the emergent discourse speaks in calm and pragmatic terms of a new energy economy that is already in the process of establishing itself ('transition', 'energy descent', 'beyond oil'), us(ing) metaphorical language to frame climate–friendly behaviour as desirable" (p. 35).

They argue that constructive environmental behavior can be normalized

through the promotion of the *ordinary hero*, de–centralized, non–authority hero figures, who put individual mitigating efforts into better context with collective community–level efforts. Constructive environmental behavior becomes the desirable *emergent norm* (Turner & Killian 1972), the things good citizens just do; the positive side of LeVine and Campbell's (1971/1972) *universal stereotypes*. The water rationing during the California drought in 1976–77 provides an illustrative example. During this period, residents were forbidden to wash their own cars or water their gardens. Short, military–style showers were encouraged. Even in the most Libertarian–Republican type of neighborhoods, this kind of specific policy was welcomed. It was a collective cause around which neighbors rallied, made jokes, and used social pressure to ensure the reluctant conformed. This 'good citizen' behavior is the vital engagement in community, which we know from Chapter One, is a key part of how humankind creates meaning (Campbell 1949, Csíkszentmihályi 1990, Haidt 2006, Maiteny 2000, Seligman et al. 2005, Tilly 2006). Community leaders can tap into our universal quest for meaning, purpose, and community by showing average citizens how to become community heroes, instead of focusing on an overwhelming, worldwide threat (Louv 2007).

The regionalization of food systems in particular has become a powerfully emotive rallying idea in the move towards bioregions. Food crosses ideas and policy in health, education, security, the environment, agriculture, and immigration, and the local food movement incorporates many different ideas and aspirations[195]. In a bad economy, local food has become cheaper, in season and sustainable. Cooking and gardening answer environmental, health, and economic fears and appeal to health care providers worried about the increasing obesity and "lifestyle" diseases among children. School and urban gardens provide food, education, and employment, while abandoned lots fuel urban farmer's markets and cooperative farming. This has led to a revival of "farmland nostalgia", characterized by harvest festivals and farm tours, as well as an increase in farming apprenticeships and young farmers (Bittman 2015). In 2007 the number of farms grew in the United States, reversing a declining trend since WWII. It brings in local farmers using the power of the Internet to sell their crops directly to consumers through community supported agriculture (CSA), farmers markets, and col-

[195] Such as Slow Food (versus fast food), farm–to–fork, anti–GMO/CAFE, organic, food safety, food security, seasonality, nutrition, biodiversity, regionality, celebrity chefs, and transition towns.

lectives, and the percentage of crops which were sold directly from the farm to consumers grew nearly 50% from only five years prior. Many of these independent farmers are resisting large scale GMO agriculture, while others have sought local markets in exchange for vanishing crops, such as tobacco. Heirloom and organic farming are on the rise, which may eventually lead to shift away from the wasteful policies against "irregularly–shaped" agriculture[196].

E. Potential for Transformation

While the steps outlined above are by no means exhaustive, together they outline the potential for a *global interpretive frame transformation* (Snow et al. 1986), which would enable the West to address climate change and the larger context of social and environmental issues. Yet, successful transformation will depend upon realizing the shifts in the deep frames discussed in this chapter within western institutions. In other words, these shifts must be institutionalized into the fundamental education, ideals, decision making processes, and measures of success within western civil, public, and private sectors. Ultimately, any transformation must begin with a recognition of the rhetorical mixing of universal values and western relativist ideals. On one random day, I did a quick search in the mass media for illustrations of this rhetorical mixing and found two excellent examples from each side of the Atlantic. In the Netherlands, the NRC Handelsblad (2009), widely held to be the most intellectual of the Dutch daily press, was conducting a poll, which asked the question, "Do you value democracy and the free market?[197]", as if the two were part of the same whole. In the US, the well–regarded Pew Research Center (2009b) was reporting a survey of Europeans on their views of democracy and capitalism and stated as an underlying assumption that "individualism…(is) one of the key values often associated with democracy" (p. 27). We must de–couple universal ideals from western notions, stop exporting the false universal ideals of western progress and materialism, and replace the false choice discourses discussed throughout this dissertation between science, religion, society, and nature with richer common ground discourse. This should go a long way to reducing the western exceptionalism that has so blinded the West to solutions from outside its own construction. Fortunately, American exceptionalism is already decreasing. While 72% of Americans around their eighties believe the U.S. is the great-

[196] Currently, "supermarkets and their privately set standards already loom larger for many farmers than the rules of the World Trade Organization" (Dugger 2004).

[197] "Waardeert u de democratie en vrije markt nog wel?"

est country in the world, only 32% of those in their twenties agree (Pew Research Center 2011: 43). Each generation has successively become less blinded by national exceptionalism, more likely to compromise with allies and less likely to believe that "religious faith and values" are the key to national success (p. 45).

Opinion polls indicate that western public interest in climate change remains high, despite – or perhaps because of – the *perfect storm* (Junger 1997) of environmental, economic, and health crises. An opinion poll, taken by the Yale Project on Climate Change and the George Mason University Center for Climate Change Communication (2009), in the U.S. a full month after the crises broke in August 2008 showed that, while "the economy dwarfed all other issues (76 percent said it was a "very high" priority), global warming remain(ed) a high or very high national priority for 72 percent of Americans." More importantly, Americans seem to understand it cannot ignore this environmental crisis in order to focus on the economy. "Despite the economic crisis, over 90 percent of Americans said that the United States should act to reduce global warming, even if it has economic costs." Finally, more than two–thirds of Americans realize their own responsibility to act, regardless of what other countries do. While large majorities of Americans still support centralized, technological solutions to it (61 percent wanted more nuclear power stations), even more believe that individual actions have an impact (69 percent).

Yet, interest in climate change may simply be in vogue at this moment because of the multiple crises and may eventually fade in popularity as the economy recovers and centralized environmental policy instruments, such as a carbon trading market, appear to "solve" climate change. This possibility has strong precedence with prior environmental emblems (Hajer 1996). Most importantly, though, significant political power is stacked against the odds of reversing the disproportionate influence of the private sector on broader western policy. Massive supra–national corporations depend upon and thrive in the current dominant western system. To preserve this domination, these organizations and their public sector enablers are waging major public campaigns to convince westerners that the crises, including anthropogenic climate change, can be addressed within the same societal structure, which caused it in the first place.

The following two articles illustrate how the current struggle between the dominant and insurgent discourses is being played out. The first article il-

lustrates the ways that indigenous groups are tapping global disaffection with the false promises of the western worldview to fight for their Gaian way of life.

> In February 2009, the United States – Peru Trade Promotion Agreement went into effect and, despite the non–binding United Nations General Assembly (2008) Declaration on Indigenous Rights, which requires "informed consent" of indigenous communities for any kind of private commercial activities in their territories, the Peruvian Congress passed two decrees which opened up their rainforest to oil and gas exploration without consultation, let alone consent. Amazonian tribes led by Aidesep, an indigenous rights group in Peru, set up roadblocks to stop this exploration. On 6 June, Peruvian security forces used violence to try and remove them and enforce the decrees. Despite the overwhelming fire power of the security forces (Loudon 2009), Aidesep prevailed after eleven days of armed conflict when the Peruvian Prime Minister announced both his resignation and his instructions to Congress to repeal the decrees for oil and gas exploration in the rainforest territory of the Amazonian tribes (Carroll 2009). This announcement came after intense pressure from international rights groups, including many in the U.S., who were horrified at the violence following the trade agreement made in their name.[198]

The second article illustrates the massive power multinational corporations carry, even in their own home countries, and why, despite the culpability of the West, this dominant worldview continues to shape public discourse on many social issues and may continue to prevail as a global system.

> For most of the late spring and early summer of 2009, the U.S. was engaged in a heated debate on universal health care, a right guaranteed in every other developed nation. Despite the fact that a significant majority of the American general public (64 percent in 2009) (Grove & Chernaik 2009) and physicians (59 percent in 2007) (Carroll & Ackerman 2008) support the single payer option model used in other western nations, this option was deemed “off the table” and those who tried to argue for it were arrested during Congressional debates (Goodman 2009). On 17 June, Blue Dogs and New

198 www.aidesep.org.pe

> Democrats, who self–identify as centrist Democrats, announced that they had banded together to ensure that "any public plan won't gain a competitive advantage over private insurance plans" (Soraghan 2009). This continuation of the corporate welfare system (Nader 2000), and their determination to see the private sector as the mechanism to solve public problems, is supported by significant majorities within the western public sector and their global institutional enablers and will likely shape public policy for years to come.
> [199]

In his book, "Why We Disagree on Climate Change", Hulme (2009) identified four myths[200] in the West, which are rooted in different human instincts. *Jubilee*, the myth rooted in justice, describes the constraints of this paradigm struggle in the West:

> "…the myth of Jubilee, born of justice, tells us of the inescapable call for humans to respond to injustice. Climate change opens out for us new ways of understanding the willful and structural causes of inequality and injustice in the world, and challenges our instinct to respond. But we see, too, in climate change, how this instinct for justice clashes with the structures that hem us in, and how it reveals the limits of our individual moral agency (p. 358)."

The ultimate question, "Will the western worldview continue its domination and ultimately destroy the climate we depend upon or will the crises permanently shift western societies toward a more Gaian worldview?", will not be answered for several years and then only with the benefit of hindsight. In the short term, the West is likely to continue dictating the parameters of policy negotiations and solutions to climate change. The decentralized nature of a bio-regional worldview may simply preclude it from ever replacing one so predisposed to central control, unless one of those as yet unrealized catastrophes, e.g., nuclear bombs, violently forces re–localiza-

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199 www.nytimes.com/2009/11/15/us/politics/15health.html?hp

[200] The first three myths map loosely to Douglas and Wildavsky's (1982) egalitarians, fatalists, and hierarchists, respectively.

tion[201]. Yet, perhaps in the long term, climate change will partially catalyze enough change in western society to ensure humankind's survival.

Or perhaps, the West will not adapt. If so, evolution may ultimately favor those who have always lived sustainably within nature's boundaries. For as Mander (2006) points out: "Given the terrible incursions (indigenous people) have withstood over centuries, their continued presence on Earth is itself proof of the validity of their social, political and spiritual choices (p. 226)".

F. Chapter Summary

The third and final section of this manuscript – Chapter Five – completed the second and third tasks of *global interpretive frame transformation* by first identifying why individuals would change and then articulating solutions to actualize that change. The primary conceptual insight of this chapter - and indeed of this entire dissertation - was linking the universal quest for meaning and mutually constructed cultural answers we understood from Chapter One, with solutions to address climate change, inspired by the ancient, yet marginalized Gaian, deep ecology worldview and the global movement for social and environmental justice. For this worldview both answers humankind's universal quest for meaning and addresses the multiple crises in which we find ourselves by resituating westerners within the natural world.

[201] James Howard Kunstler's novel "World Made By Hand" envisions such a post–energy world in which society is violently forced to re–localize. It paints a picture of both recaptured joy in and synchronization with nature, as well as the tough physical labor, serfdom, vigilante–type justice and rise of extreme religiosity one associates with pre–industrial societies.

Conclusion

In the Introduction, anthropogenic climate change was presented both as a scientific phenomena and a social phenomena driven out of the western world. The challenge was made to use what we know about culture, metaphor, and the universal quests of humankind to realize the type of *global interpretive frame transformation*, which had characterized successful social movements in the past and seemed necessary, to address climate change. The following research questions were established for the dissertation:

I. What does the development of and intense public interest around anthropogenic climate change say about the United States? (Climate Change as Metaphor)

II. How might this interest catalyze significant change in the United States? (Climate Change as Catalyst)

To answer these questions, the theoretical foundation outlined in the first chapter explored the opposing notions of cultural relativism and universalism through concepts of worldviews, culture, cultural difference, and social construction/determinism, and looked at ways in which both cultural relativism and universalism had been misconstrued and abused. The second chapter looked at how the western worldview developed through the twin influences of Protestantism and western science and how the natural world and non–western societies have suffered exponential damage because this worldview has been institutionalized and universalized throughout the world. Chapter Three looked at how two key deep frames enabled the scientific and social construction of anthropogenic climate change. Chapter Four looked at the development of the third deep frame – One World Market – which drove climate change, and the auxiliary crises in the economy, food, energy, and health to which it has become metaphorically linked, and argued that these crises are not being solved (and cannot be solved) within the same institutional framework that created them. Finally, Chapter Five

looked at the alternative Gaian worldview for solutions and showed how its ability to meet the universal quest of humankind might motivate Americans to embrace it.

Ultimately, every PhD student must answer the question, "How does your work contribute to the current body of knowledge?" My answer is four fold:

I. First, my dissertation demonstrates how the (culturally–relative) dominant western worldview has been universalized – through the linking of truly universal values, such as freedom, democracy, and peace, with very western goals of free market capitalism and economic growth, individualism as freedom, and happiness as the pursuit of material wealth – and institutionalized within international organizations, such as the World Bank, IMF, WTO, OECD, and sections of the United Nations.

II. Second, my dissertation demonstrates how this dominant, institutionalized western worldview led to anthropogenic climate change, and a host of auxiliary crises, and how the solutions for it continue to be framed within the same worldview.

III. Third, this dissertation demonstrates why – despite massive efforts to the contrary – a marginalized, yet millennia–old Gaian worldview has survived because its core tenets mirror the universal quests of humankind for meaning, purpose, community, and contact with nature.

IV. Finally, this dissertation demonstrates how climate change has become a metaphor for the failure of the dominant western worldview to address the social and environmental issues identified herein and how this failure – along with a growing awareness that something is just not right in our western system – is catalyzing social change towards a Gaian worldview, which seeks to offer fundamentally different alternatives.

A. Recommendations

Throughout this dissertation several recommendations have been introduced, but I list them here in four categories for clarity sake:

Public Policy

I. Reject the notions of corporate colonialism that every public service is a business and nurture public policies based on the public good, as opposed to economic growth and profiteering.
II. Fully implement human rights to clean water, air, and environment, as well as health and food, through full social costing of private sector products and services and a strengthening of the permitting system for private access to any public domain, e.g., water, air, land, both within the United States and any international trade pacts.
III. Reject policies of cultural imperialism in trade pacts and policies which push an extreme form of capitalism on the world, e.g., the Trans-Pacific Partnership.
IV. Promote farming to increase the number of farmers, equating them with public servants, e.g., The Young Farmers Coalition.
V. Recognize that because local geography varies so dramatically between regions, there is no "one-size-fits-all" solution to environmental challenges, such as climate change; nurture bio-regional communities and multigenerational decision making to reduce the scale of economy, food, health, and society and stop marginalizing local, decentralized campaigns of millions of individual efforts.
VI. Support public policy that seeks to work with natural forces instead of fighting them, e.g., dam demolition, lawn replacement, using indigenous societies' notions of polychromatic decision making, science and technology intervening only with careful deliberation, simple material needs and natural rights.
VII. Fund programs which teach self–efficient skills to kids and adults – in the form of cooking, gardening - lawn conversion rebates for returning it to "productive land" - promoting communities pools and parks, so individuals are less likely to want their own - also promotes community.
VIII. Nurture more local, deliberative democratic model, which focuses more on communal rights and restorative justice, local-scale community and mutual responsibility between people and community.
IX. Support policies which favor reinhabitation to relearn how to become members of a unique biotic community, returning to regional economies of seasonal eating, local energy sources, and much less high speed transportation of goods and people.
X. Supporting policies which support local businesses, tradespeople, and farms.

Private Sector

I. Move the burden of proof from the government needing to "prove it is harmful" to corporations needing to "prove it is not", particularly in the case of agriculture, energy, and technology.
II. Acknowledge the dangers of private sector influence in policy making (the tendency toward oligarchy, the loss of food security and economic independence - "too big to fail") by strengthening anti-lobbying laws, particularly the circular door practices in the US.
III. Strengthen public campaign financing and sharply reduce maximum election contributions, regardless of whether from person or corporation.
IV. Set clear parameters around public issues and work to solve them so that private enterprises know the rules (not make the rules), e.g. eliminate carbon markets and implement a simple carbon tax.
V. Promote production that favors labor over materials, i.e., a more "repair–and repurpose–oriented" culture, which provides jobs and reduces landfill waste, over the current "throw away" culture for electronics, appliances, computers, and vehicles.
VI. Promote "codetermined" board structures, perhaps through tax breaks or preferential government contractor status.

Local Communities

I. Promote group decision making on environmental issues - open and transparent - for longer term and more permanent common benefits and societal action.
II. Vitally engage the unique, individual talents of community members to (re)build healthy, self-sustaining communities, which are themselves uniquely shaped by the natural world surrounding it.
III. Normalize constructive environmental behavior through the promotion of the ordinary hero and promote the value of individual efforts at a definable community level.

Academia and Childhood Education

I. Balance the industries of cultural difference, identity politics, and false choice discourse by teaching culture as an interdisciplinary program, particularly in conjunction with psychology, to create a more nuanced understanding of culture and universalist ideas.
II. Call out those who misuse concepts of culture and cultural differences as an excuse and those who inappropriately equate elements of western ideas as universal values.

III. Support research which explores the moral implications of technological advance before they are created.
IV. Promote more respectful dialogue and the search for common ground between academia and religious leaders dedicated to addressing climate change.
V. Promote childhood education policies towards greater freedom in their own natural environments, not artificial ones, and engagement in wild nature.
VI. Include subjectivity of researchers in academic curriculum.
VII. Promote policies which increase scientific questioning, not consensus.

B. Future Research

Most dissertations raise as many new questions as they attempt to answer, and mine is no exception. From the insights gained in conducting and writing this dissertation, the following ideas are specific ideas within the dissertation I would like to explore in greater depth in the future:

I. How has the western worldview – particularly the convergence of modern science, technology, and capitalism – shaped the policy and philosophy in the West toward food, from bottled baby formula and genetically modified organisms to wasteful policies on "irregularly–shaped" agriculture?
II. To what extent could a review of prior cases of philosophical institutionalization foretell whether the western or deep ecology worldview will eventually prevail?
III. As the *desert people* migrated to the forests, why did their cosmology not evolve with it? Are the *desert people* more resilient, as argued by Sapolsky (2005) or are the *forest people* more resilient, as argued by Mander (2006)? What factors will determine resilience? Have the factors indicating resilience themselves evolved?
IV. To what extent does the Internet facilitate the *global civil society* advocated by Soros (1998) to challenge globalization? What role do/will cultural identities play?
V. In making a shift to bio-regional scale economies, how can all of the dangers of tribalism, exceptionalism, and the culturally relative conflicts I discuss in more detail in Chapter One be mitigated? How can Internet communication offer global, yet de–centralized, opportunities to facilitate virtual communities and build trust and presence (Nevejan 2007) in a de-mobilized world?

Appendix A: George Murdock's Universals of Culture

Age–Grading
Athletic Sports
Bodily Adornment
Calendar
Cleanliness Training
Community Organization
Cooking
Co–Operative Labour
Cosmology
Courtship
Dancing
Decorative Art
Divination
Division Of Labor
Dream Interpretation
Education
Eschatology
Ethics
Ethno–Botany
Etiquette
Faith Healing
Family Feasting
Fire–Making
Folklore
Food Taboos
Funeral Rites
Games
Gestures
Gift–Giving
Government
Greetings
Hair Styles
Hospitality
Housing
Hygiene
Incest Taboos
Inheritance Rules
Joking
Kin Groups
Kinship
Nomenclature
Language
Law
Luck Superstitions
Magic
Marriage
Mealtimes
Medicine
Obstetrics
Penal Sanctions
Personal Names
Population Policy
Postnatal Care
Pregnancy Usages
Property Rights
Propitiation Of Supernatural Beings
Puberty Customs
Religious Ritual
Residence Rules
Sexual Restrictions
Soul Concepts
Status Differentiation
Surgery
Tool–Making
Trade
Visiting
Weather Control
Weaving

Appendix B: Cleaveland, Craven, & Danfelser's Universals

Material Culture
- Food
- Clothing & Adornment
- Tools & Weapons
- Housing & Shelter
- Transportation
- Personal Possessions
- Household Articles

The Arts, Play, and Recreation
- Arts, Play, & Recreation
- Folk Arts & Fine Arts
- Standards of Beauty & Taste

Language & Nonverbal Communication
- Nonverbal Communication
- Language

Social Organization
- Societies
- Families
- Kinship Systems
- Religion

Social Control
- Systems & Governmental Institutions
- Rewards & Punishments

Conflict & Warfare
- Kinds of Conflict
- Kinds of Warfare

Economic Organization
- Systems of Trade & Exchange
- Producing & Manufacturing
- Property
- Division of Labor
- Standard of Living

Education
- Informal Education
- Formal Education

World View
- Belief Systems

Appendix C: Environmental Discourse & Political Philosophy

Devall and Sessions (1985: 69) first graphed the key tenets of the dominant and deep ecology worldviews in contrast to each other, as discussed throughout this dissertation. Killingsworth and Palmer (1992: 11) then mapped Devall and Sessions' contrast between the Dominant and Deep Ecology Worldviews on their *Continuum of Perspectives on Nature.* On one side of the continuum, the view of Nature as Object, embodies the separateness – or Cartesian split – of the Dominant (western) Worldview. In contrast, the view of Nature as Spirit mirrors the views of deep ecology.

Pepper (1993: 47) connected specific environmental discourses for solutions to political philosophies.

Radicals	Traditional Conservatives	Enlightened private ownership is the best way to protect nature from over–exploitation.
	Revolutionary Socialists	Environmental ills are specific to capitalism. Environmental crisis can trigger a revolutionary change.
Reformists	Market Liberals	Free market, science and technology will solve resource shortages and pollution problems. Do not believe in overpopulation because people are considered a resource. Consumer pressure and eco–sensitive products will play a major role.
	Welfare Liberals	Promote market economy with reform, planning and taxation for environmental protection. Believe that enlightened self–interest, tailored to the communal good, will solve the problems. Pressure group campaigns in plural democracies will produce appropriate legislation.

Reformists (continued)	Democratic Socialists	Parliamentary democracy with strict controls on capitalism. Emphasize the role of local government, labor and trade unions. Mixture of private and common ownership of resources, government (subsidies), and environmental protection.
Ecocentrists	Mainstream Greens	Have radical aims but reformist methods; advocate changes in lifestyle, small–scale capitalism but with profit secondary to social and environmental needs.
	Green Anarchists	Have radical aims and methods. Reject the state, class politics, parliamentary democracy and capitalism. Believe that people need to organize themselves, have responsibility and power over their own lives. Propose decentralized economy and politics, common ownership of the means of production and a spontaneous and organically evolving society. Favor non–hierarchical direct democracy. Rural and urban cooperatives and bio-regionalism.

Herndl and Brown (1996: 11) later expanded this into their Rhetorical Model for Environmental Discourse, which first suggested that rhetorical analysis of the very ways in which the environment was discussed in policy debates could aid our ability to understand and solve environmental policy issues.

Dryzek (1997) made distinctions between worldviews by whether the group saw Earth as strong or vulnerable, and whether the solutions could be defined within the current framework of its (industrial) society or if the problems themselves were rooted in the framework itself.

Rojas (1997: 47) proposed a Circular Configuration of Discourses of the Environment, which vividly illustrates the various worldviews on the natural world, which have been identified by previous scholars. What is most compelling about this illustration is that, while these worldviews are often presented as opposing sides of a linear spectrum, they actually form a continuous circle. There are beliefs, e.g., opposition to centralized power, which connect at each extreme end.

Appendix D: Environmental Issues in Interfaith Organizations

Council for the Parliament of the World's Religions
Global Ethic Foundation
Interfaith Center on Corporate Responsibility (ICCR)
Interfaith Youth Core
International Association for Religious Freedom
International Interfaith Centre
Millennium Peace Summit
Minorities of Europe
Network on Conservation and Religion (World Wide Fund for Nature)
Parliament of the World's Religions
Peace Council
Project Towards a Spiritual Forum for World Peace at the United Nations
Temple of Understanding
United Religions Initiative
World Conference on Religions and Peace
World Congress of Faiths
World Faiths Development Dialogue
World Fellowship of Inter–Religious Councils

References

Abbott, A. (2004) Methods of Discovery: Heuristics for the Social Sciences (New York: W. W. Norton).

Abdelal, R., Blyth, M. & Parsons, C. (2010) Constructing the International Economy (Ithaca, NY, USA: Cornell University Press).

Abdu'l–Bahá (1978) Selections from the Writings of Abdu'l-Bahá (Haifa, Israel: Bahá'í World Centre).

Ackerman, F. & Stanton, E. (2008) The Cost of Climate Change: What We'll Pay if Global Warming Continues Unchecked, *Natural Resources Defense Council*, May.

Adam, D. (2009) ExxonMobil continuing to fund climate sceptic groups, records show, The Guardian, 1 July, Available <http://www.guardian.co.uk/environment/2009/jul/01/exxon-mobil-climate-change-sceptics-funding>, Last accessed 7 January 2011.

Afrasiabi, K. (1995) Toward an Islamic Ecotheology, *Hamdard Islamicus* (Pakistan: Hamdard Foundation) Vol. **XVIII**, p. 1.

Alliance of Religions and Conservation (2008) Climate Change, the Natural Environment and the Faiths: Guide to Creating Your Seven Year Plan, Available <http://arcworld.org/downloads/Guidebook%207Year%20Plan%20latest%20web.pdf>, Last accessed 25 September 2015.

American Environics (2006) Evolution of Global Values, Available <http://www.americanenvironics.com/PDF/Evolution_of_Global_Values_AE.pdf>, Last accessed 7 January 2011.

American Meteorological Society (2012) Definition of Climate, Available <http://glossary.ametsoc.org/wiki/Climate>, Last accessed 24 September 2015

Anderson, C., Berkowitz, L., Donnerstein, E., Huesmann, L.R., Johnson, J. Linz, D., Malamuth, N. & Wartella, E. (2003) The Influence of Media Violence on Youth, *Psychological Science in the Public Interest*, Vol. **4** (3), pp. 81 – 110.

Andrews, E. (2007) Counting On Failure, Energy Chairman Floats Carbon Tax, *New York Times*, 7 July, Available http://www.nytimes.com/2007/07/07/washington/07carbon.html>, Last accessed 16 December 2010.

Annan, K. (1997) Statement on the Fiftieth Anniversary Year of the Universal Declaration of Human Rights. Speech Presentation at University of Tehran, Iran.

AnnArbor.com (2010) Our nation's wealthiest need to invest in jobs, Available <http://www.annarbor.com/news/opinion/our-nations-wealthiest-need-to-invest-in-jobs/index.php>, Last accessed 9 February 2011.

Appadurai, A. (1996) Modernity at Large: Cultural Dimensions of Globalisation. (Minneapolis: University of Minnesota Press).

Appiah, K.A. (2006) The Case for Contamination, *The New York Times Magazine*,1 January, Available <http://www.nytimes.com/2006/01/01/magazine/01cosmopolitan.html>, Last accessed 16 December 2010.

Armstrong, K. (2005) A Short History of Myth (Edinburgh: Canongate).

Arnoldy, B. (2007) Now In The Bay Area: The Anti-Gas Station, *Christian Science Monitor*, 30 April, Available <http://www.csmonitor.com/2007/0430/p02s02-ussc.html>, Last accessed 16 December 2010.

ASEAN (1967) The Asean Declaration (Bangkok Declaration), Available <http://www.asean.org/news/item/the-asean-declaration-bangkok-declaration>, Last accessed 24 September 2015.

Ashcroft, B., Griffiths, G. & Tiffin, H. (1998) Post-Colonial Studies: The Key Concepts (London: Routledge).

Associated Press (2008) Doubling of Vitamin D for Children Is Urged, 13 October, Available http://www.nytimes.com/2008/10/13/health/policy/13vitamind.html>, Last accessed 16 December 2010.

Association of the Southeast Asian Nations (1993) Bangkok Declaration, 29 March – 2 April.

Australian National University (2008) Public Opinion Towards the Environment Poll Report, 3 October.

Avaaz (2009) What Happened After I Signed the Petition?, email communication, 16 July.

Axtell, R. (1993) Dos and Taboos Around The World (New York: Wiley).

Bahá'í International Community (1986) A Bahá'í Perspective On Nature And The Environment (Geneva: International Environment Forum).

Bainton, R.H. (1964) The Horizon History of Christianity (New York: HarperCollins).

Bals, C. (2009) Between Poznan and Copenhagen: The Climate Train in the "Valley Of Death": Results of the UN Climate Summit in Poland, 1-12 December, 2008, Germanwatch.

Ban, K.M. (2007) *Closing Speech, Global Compact Leaders Summit*, Speech Presentation at United Nations Global Compact Leaders Summit Session, Geneva, July.

Bangladesh Bureau of Statistics and the United Nations World Food Program World Bank (2004) Local Estimation of Poverty and Malnutrition in Bangladesh Report (Dhaka, Bangladesh:), 12 May.

Barber, B. (2009) Which Capitalism Will It Be?, *Newsday*, 22 February, Available http://www.newsday.com/opinion/which-capitalism-will-it-be-1.892080>, Last accessed 16 December 2010.

Barkindo, M. (2006) OPEC Statement, United Nations Climate Change Conference, Nairobi, 17 November.

Barlett, D. & Steele, J. (2008) Monsanto's Harvest of Fear, *Vanity Fair*, May, Available http://www.vanityfair.com/politics/features/2008/05/monsanto200805>, Last accessed 16 December 2010.

Barnes, B. (2009) Disney Expert Uses Science to Draw Boy Viewers, *New York Times*, 14 April, Available http://www.nytimes.com/2009/04/14/arts/television/14boys.html>, Last accessed 16 December 2010.

Barringer, F. (2008) Chinook Salmon Vanish Without a Trace, *New York Times*, 17 March, Available <http://www.nytimes.com/2008/03/17/science/earth/17salmon.html>, Last accessed 16 December 2010.

Barthes, R. (1994) The Semiotic Challenge (*trans.*) Howard, R. (Berkeley: University of California Press).

Barthes, R. (1998) Mythologies (*trans.*) Lavers, A. (New York: Hill & Wang).

Bate, J. (2000) The Song of the Earth (London: Picador).

Bate, R. & Tren, R. (2006) Government-Controlled Pharmaceutical Research and Development – A Recipe for Disaster, *American Enterprise Institute*.

Bauman (1998) Globalization: The Human Consequences (Cambridge, UK: Polity Press).

Baumert, K. A, Herzog, T. & Pershing, J. (2005). Navigating the Numbers: Greenhouse Gas Data and International Climate Policy, *World Resources In-*

stitute, Available <http://pdf.wri.org/navigating_numbers.pdf>, Last accessed 7 February 2011.

BBC (2007) All Countries Need to Take Major Steps on Climate Change: Global Poll, 25 September, Available <http://news.bbc.co.uk/2/shared/bsp/hi/pdfs/25_09_07climatepoll.pdf>, Last accessed 16 December 2010.

BBC (2008a) Airline in first biofuel flight, 24 February, Available <http://news.bbc.co.uk/2/hi/7261214.stm>, Last accessed 16 December 2010.

BBC (2008b) Climate Laws to Include Planes, 26 October, Available <http://news.bbc.co.uk/2/hi/uk_news/politics/7693875.stm>, Last accessed 16 December 2010.

BBC (2008c) EU Set to Backtrack on Emissions, 16 October, Available <http://news.bbc.co.uk/2/hi/7673411.stm>, Last accessed 16 December 2010.

Beck, U. (2002) Cosmopolitan Society and its Enemies, *Theory Culture Society* Vol. **19** (1–2): pp. 17–44.

Becker, A. (1999) Sharp Rise in Eating Disorders in Fiji Follows Arrival of TV: After Three Years of Western Programming, Five Times as Many Teenage Girls Report Vomiting to Control Weight, *Harvard Medical School Office of Public Affairs*.

Becker, E. (2003) U.S. Contests Europe's Ban On Some Food, *New York Times*, Available <http://www.nytimes.com/2003/05/14/business/us-contests-europe-s-ban-on-some-food.html?fta=y>, Last accessed 6 January 2011.

Beisner, E. Driessen, P., McKitrick, R., and Spencer, R. (2006) A Call to Truth, Prudence, and Protection of the Poor: An Evangelical Response to Global Warming, *Cornwall Alliance*.

Benkirane, R (2002) The Cultural Dimension of the Current Crisis in *Behind the News: Visions for Peace - Voices of Faith Bulletin* (Geneva: World Council of Churches), Issue 14.

Benyus, J. (2002) Biomimicry: Innovation Inspired by Nature (New York: Harper Perennial).

Berg, P. & Dasmann, R. (1977) Reinhabiting California, In Berg, P. (*ed.*) "Reinhabiting a separate country: A bio-regional anthology of northern California" (San Francisco: Planet Drum Foundation).

Berger, P. & Luckmann, T. (1966) The Social Construction of Reality (New York: Anchor Books)

Berghof Research Center for Constructive Conflict Management (2007) Available < <http://www.berghof-handbook.net>.

Bergin and Erman (2008) Exxon, Shell Seen Posting Record 2007 Profits, *Reuters* 25 January, Available <http://www.reuters.com/article/idUS-L2063082320080125>, Last accessed 16 December 2010.

Bernard, A., Paltsev, S., Reilly, J., Vielle, M. & Viguier, L. (2003) Russia's Role in the Kyoto Protocol (Cambridge, MA: MIT Joint Program on the Science and Policy of Global Change) Report No. 98, June.

Berry, W. (1993) Sex, Economy, Freedom, and Community (New York: Pantheon Books).

Berry, W. (2001) The Idea of a Local Economy *Orion Magazine*, Available <http://www.orionmagazine.org/index.php/articles/article/299>, Last accessed 16 December 2010.

Berry, W. (2005) Renewing Husbandry, *Orion Magazine*, Available <http://www.orionmagazine.org/index.php/articles/article/160>, Last accessed 16 December 2010.

Bhagwati, J. (2004) In Defense of Globalization (Oxford: University Press)

Bilefsky, D. & Castle, S. (2009) Czech President Objects to Treaty's Property Rights, *New York Times*, 9 October, Available <http://www.nytimes.com/2009/10/10/world/europe/10union.html?_r=3>, Last accessed 16 December 2010.

Binsbergen (1999) *Culturen Bestaan Niet*, Inaugural Lecture Erasmus University Intercultural Philosophy, Rotterdam.

Bird, E. (1987) The Social Construction of Nature: Theoretical Approaches to the History of Environmental Problems, *Environmental Review*, **11** (4), pp. 255-264.

Birrer, F. (1994) *Reality Construction As Problem Oriented Decomposition*, Revised Conference Paper, Explorations in Constructive Realism, 29-30 June 1993.

Bittman, M. (2015) Let's Help Create More Farmers, *New York Times*, <http://www.nytimes.com/2015/06/10/opinion/lets-help-create-more-farmers.html?mabReward=CTM&action=click&pgtype=Homepage&region=CColumn&module=Recommendation&src=rechp&WT.nav=RecEngine&_r=0>, Last accessed 11 June 2015.

Black, N. (2007) Darwin's 'Rottweiler', Christian Apologist Heat Up God Debate, *Christian Post*, 5 October, Available <http://www.christianpost.-

com/article/20071005/darwin-s-rottweiler-christian-apologist-heat-up-god-debate>, Last accessed 16 December 2010.

Boas, F. (1911 (1938)) The Mind of Primitive Man (New York: The Macmillan Company), Fourth Edition.

Bodissey, B. (2007) Multiculturalism and the Enlightenment, 11 January, *Gates of Vienna Blog*, Available http://gatesofvienna.blogspot.com/2007/01/multiculturalism-and-enlightenment.html>, Last accessed 27 July 2009.

Bond, Anthony (2014) "UK Floods: David Cameron Warns Crisis Will Get Worse but Vows 'Money is No Object' to Helping Communities", *The Daily Mirror*, February 11.

Borgos, J. (2007) The Sami people: A brief history, Available <http://www.borgos.nndata.no/Samer.htm>, Last accessed 12 June 2009.

Borosage, R. & Vanden Heuvel, K. (2008) What Obama Needs for Progressive Reform, *The Nation*, 13 August, Available <http://www.thenation.-com/article/what-obama-needs-progressive-reform>, Last accessed 15 December 2010.

Bouchard, T.J., Lykken, D.T., McGue, M., Segal, NL and Tellegen, A. (1990) Sources of human psychological differences: the Minnesota Study of Twins Reared Apart, *Science*, Vol. 250 (4978), pp. 223-228.

Bourdieu, P. (1993) The Field of Cultural Production: Essays on Art and Literature (Cambridge: Cambridge University Press).

Boykoff, M. & Boykoff, J, (2004) Balance as Bias: Global Warming and the US Prestige Press, *Global Environmental Change* Vol. 14, pp. 125–136.

Brecher, J. & Costello, T. (1994) Global Village or Global Pillage: Economic Reconstruction from the Bottom Up (Cambridge, MA: South End Press).

Brewer, J. & Lakoff. G (2008) Why Voters Aren't Motivated by a Laundry List of Positions on Issues, *Cognitive Policy Works*, Available <http://www.cognitivepolicyworks.com/resource-center/cognitive-policy/why-voters-arent-motivated-by-a-laundry-list-of-positions-on-issues>, Last accessed 16 December 2010.

Brooks, A.C. (2008) Gross National Happiness: Why Happiness Matters for America--and How We Can Get More of It (New York: Basic Books).

Brown, D. (1991) Human Universals (New York: McGraw-Hill).

Brown, D. (2004) Human Universals, Human Nature & Human Culture, *Daedalus*, Vol. 133, (4), pp. 47-54.

Browning, W. (2003) *Green Buildings for Other Species*, Presentation at Greenbuild Conference, Rocky Mountain Institute, Pittsburgh.

Broydo, L. (1998) A Seedy Business, *Mother Jones*, 7 April, Available <http://motherjones.com/politics/1998/04/seedy-business>, Last accessed 16 December 2010.

Brunzell, T., Liljeblom, E. & Vaihekoski, M. (2009) *Short-Term Expectations in Listed Firms: The Mitigating Impact of Large Owners*, Presentation at Copenhagen Innovation Symposium, Copenhagen.

Brzezinski, Z. (1990) Grand Failure: The Birth and Death of Communism in the Twentieth Century (New York: Collier Books).

Bührs, T. (2007) *Environmental Space as a Basis for Enhancing the Legitimacy of Global Governance*, Presentation at CSGR / GARNET Conference on Pathways to Legitimacy, Warwick, UK, 17-19 September.

Bullock, H, Mountford, J., and Stanley, R. (2001) Better Policy-Making, *Centre for Management and Policy Studies*, November.

Bunnett, J. (2009) Gays in the Church, 10 May, blog Available <www.christiannation.com/forum/topics/gays-and-the-church?id=2151038%3ATopic%3A169944&page=1#comments>, Last accessed 19 April 2010.

Burgess, H. (2003) Stereotypes / Characterization Frames In *(eds.)* Burgess, G. & Burgess, H. *Beyond Intractability* (Boulder, CO USA: University of Colorado Conflict Research Consortium).

Burke, C.G and Stewart, K. (1992) The Drivers of Organizational Behavior and Culture (USC: Working Paper) quoted in Ping, M.D. (1998) Culture and Business: Interacting Effectively To Achieve Mutual Goals in Weaver, G. (ed) *Culture, Communication and Conflict: Readings in Intercultural Relations* (Boston: Pearson Publishing), p. 518-526.

Burke, K. (1966) Language as symbolic action: essays on life, literature, and method (Berkeley and Los Angeles, CA USA: University of California Press)

Burnett, D. B. (2010) What the Spill Means for Offshore Drilling, *New York Times*, 29 April, Available <http://roomfordebate.blogs.nytimes.com/2010/04/29/what-the-spill-means-for-offshore-drilling/?scp=1&sq=%22society%20and%20the%20rest%20of%20civilization%20depends%20upon%20plentiful%20power%20to%20supply%20us%20with%20shelter,%20food,%20security%20and%20comfort%22&st=cse>, Last accessed 31 January 2011.

Burns, J. & Thomas, L. (2009) Anglo-American Capitalism on Trial, *New York Times*, 29 March, Available <http://www.nytimes.com/2009/03/29/weekinreview/29burns.html>, Last accessed 16 December 2010.

Bush, G.W. (2001) President Discusses War on Terrorism, Address to the Nation, Atlanta, Georgia, 8 November.

Büscher, B. and Igoe, J. (2013) 'Prosuming' Conservation? Web 2.0, Nature and the Intensification of Value-Producing Labour in Late Capitalism, *Journal of Consumer Culture*, Vol. 13(3), pp. 283–305.

Bushman, B. & Anderson, C. (2001) Media Violence and the American Public: Scientific Facts Versus Media Misinformation, *American Psychologist,* Vol. 56 (6/7), pp. 477-489.

Bushrui, S. (2008) The Precious Integrity of Religious Experience: A Response to the Neo-Atheist Critique, Lecture Abstract, Temenos Academy, London, 23 July.

Callendar, G.S. (1938) The Artificial Production of Carbon Dioxide and Its Influence on Temperature, *Quarterly Journal of the Royal Meteorological Society* Vol. 64, pp. 223-40.

Calvin, J. (1518 (2008)) Institutes Of The Christian Religion (*trans.*) Beveridge, H. (Peabody, MA USA: Hendrickson Publishers).

Campanario, J.M. & Martin, B. (2004) Challenging Dominant Physics Paradigms, *Journal of Scientific Exploration*, Vol. 18 (3), pp. 421-438.

Campbell, J. (1949) Hero with a Thousand Faces (Novato, CA USA: New World Library), Third edition.

Campbell, J. (1959) The Masks of God, Vol. 1: Primitive Mythology (New York: Viking Penguin).

Campbell, J. (1988) The Power of Myth with Bill Moyers (New York: Anchor Books Doubleday).

Campbell, J. (2006) The Many Faces of God: Science's 400-Year Quest for Images of the Divine (

Cantril, J. (2010) Using Place-Based Identities to Amplify the Impulse for Sustainable Conservation Biology, Conference Paper, National Communication Association, San Francisco, November.

Carey, J. W. (1989) Communication as culture: Essays on media and society (Winchester, MA: Unwin Hyman).

Carmichael, C. (2007) Practicing Creation Care, Eco-Justice Program of the National Council of Churches, Available <http://www.ncrlc.com/5_-Carmichael05.html>, Last accessed 16 December 2010.

Carroll, A. & Ackerman, R. (2008) Support for National Health Insurance among U.S. Physicians: 5 Years Later, *Annals of Internal Medicine* Vol. 148 (7), p. 566.

Carroll, R. (2009) Peru's prime minister to step down, *Guardian*, 17 June, Available <http://www.guardian.co.uk/world/2009/jun/17/yehude-simon-peru-resign>, Last accessed 16 December 2010.

Carson, C. (2008) Get your assets in gear: aligning IP strategy and business strategy, *United Nations World Intellectual Property Organization, Small and Medium Enterprise*, Available <http://www.wipo.int/sme/en/documents/pdf/ip_business_strategy.pdf>, Last accessed 5 January 2011.

Carson, R. (1962 (2002)) Silent Spring (New York: Mariner Books).

Carvalho, A. (2007) Ideological cultures and media discourses on scientific knowledge: re-reading news on climate change, *Public Understanding of Science,* Vol. 16, pp. 223–243

Carvalho, A. (2010) Media(ted)discourses and climate change: a focus on political subjectivity and (dis)engagement, *Wiley Interdisciplinary Reviews: Climate Change*, Vol. 1, Issue 2, pp. 172–179.

Cavoukian, R. & Olfman, S. (2006) Child Honoring: How to Turn This World Around (Westport, CT, USA: Praeger Publishers).

Chang (2009) Study Finds New Evidence of Warming in Antarctica, *New York Times,* 22 January, Available <http://www.nytimes.com/2009/01/22/science/earth/22climate.html>, Last accessed 16 December 2010.

Chaplin, L.N. & Roedder John, D. (2007) Growing up in a Material World, *Journal of Consumer Research,* Vol. 34, pp. 480-93.

Charland, M. (1987) Constitutive Rhetoric: The Case Of The Peuple Quebecois, *Quarterly Journal Of Speech*, Vol. 73, pp. 133-150

Charnovitz, S. (1994) Free Trade, Fair Trade, Green Trade: Defogging the Debate, *Cornell International Law Journal*, Vol. 27, pp. 459-525.

Charnovitz, S. (1997) A Critical Guide to the WTO's Report on Trade and Environment, *Arizona Journal International & Comparative. Law*, Vol. 14, pp. 341 – 80.

Chavagneux, C. (2009) L'avenir du libéralisme, *L'Economique Politique* 13 May (trans) Thatcher, L. (2009) The Future of Capitalism, *truthout.org*, Avail-

able <http://www.truth-out.org/051309F>, Last accessed 16 December 2010.

Chen, X. (2003) *Daoism and Environment Protection* , Presentation at Dialogue of Cultural Traditions: A Global Perspective Conference on Ethics: Ecology and Public Service Panel, Istanbul, 9 August.

Chiras, D. D. (2010) Environmental Science (Sudbury, MA USA: Jones & Bartlett Learning).

Chomsky, N. (1984) On Language and Culture (*interview*) Osiatynski, W., in Osiatynski, W. *(ed.)*, Contrasts: Soviet and American Thinkers Discuss the Future (New York: MacMillan), pp. 95-101

Chomsky, N. (2002) Manufacturing Consent: The Political Economy of the Mass Media (New York: Pantheon Books).

Chomsky, N. (2003) Chomsky on Democracy & Education *(ed.)* Peregrín Otero, C. (London: Routledge).

Chou, S., Rashad, I. & Grossman, M. (2008) "Fast–Food Restaurant Advertising on Television and Its Influence on Childhood Obesity", *The Journal of Law and Economics*, Vol. 51, (4), pp. 599–618.

Chua, A. (2004) World on Fire, How Exporting Free-Market Democracy Breeds Ethnic Hatred and Global Instability (London: Arrow Books Ltd).

Clark, M. (2002) In Search of Human Nature (London: Routledge).

Cleaveland, A., Craven, J., and Danfelser, M. (1979) Universals of Culture, *Intercom*, Vol. 92-93, (3), pp. 8-10.

Climate Change Science Program (2009) Coastal Sensitivity to Sea-Level Rise: A Focus on the Mid-Atlantic Region, Subcommittee on Global Change Research of Environmental Protection Agency.

Climatic Research Unit (2009a) CRU climate data already 'over 95%' available, Press Release, 24 November, Available <http://www.uea.ac.uk/mac/comm/media/press/2009/nov/CRUupdate>, 31 January 2011.

Climatic Research Unit (2009b) Sir Muir Russell to head the Independent Review into the allegations against the Climatic Research Unit (CRU), Press Release, 3 December, Available <http://www.uea.ac.uk/mac/comm/media/press/2009/dec/CRUreview>, Last accessed 31 January 2011.

Climatic Research Unit (2010) CRU Scientific Assessment Panel announced, 22 March, Available <http://www.uea.ac.uk/mac/comm/media/press/CRUstatements/SAPannounce>, Last accessed 31 January 2011.

CNN (2008) Mississippi River towns rush against rising water, 18 June, Available <http://www.cnn.com/2008/US/weather/06/17/midwest-.flooding>, Last accessed 31 January 2011.

CNN (2009) International day of demonstrations on climate change, 26 October, Available <http://www.cnn.com/2009/WORLD/europe/10/24/international.climate.change.demonstrations/>, Last accessed 31 January 2011.

Coalition on the Environment and Jewish Life (2015) About Us, Available <http://www.coejl.org/aboutus/>, Last Accessed 25 September 2015.

Colwell, M., Finlay, V. Hilliard, A. & Weldon, S. (2008) Many Heavens, One Earth: Faith Commitments to Protect the Living Planet, Alliance of Religions and Conservation.

Comte, A. (1844 (1865)) A general view of positivism (*trans*.) Bridges, J. H. (London: Trübner and Co.).

Connerley, M. & Pedersen, P. (2005) Leadership in a Diverse and Multicultural Environment: Developing Awareness, Knowledge, and Skills (Thousands Oaks, CA USA: Sage Publications).

Cooper, H. (2009) World Leaders Agree to Delay a Deal on Climate Change, *New York Times*, 15 November, Available <http://www.nytimes.com/2009/11/15/world/asia/15prexy.html?hp>, Last accessed 16 December 2010..

Coppock, M. (2008) Palin Speaks to Newsmax About McCain, Abortion, *Newsmax*, 29 August, Available <http://www.newsmax.com/Headline/sarah%E2%80%93palin%E2%80%93vp/2008/08/29/id/325086>, Last accessed 4 February 2011.

Costa, P., Herbst, J., McCrae, R. & Siegler, I. (2000) Personality at Midlife: Stability, Intrinsic Maturation, and Response to Life Events, *Assessment* Vol. **7**, (4), pp. 365-378.

Council for a Parliament of the World's Religions (2008) About Us, Available <http://www.parliamentofreligions.org/index.cfm?n=1>, Last accessed 11 November 2008.

Cox, R. (2010) Environmental Communication and the Public Sphere (Thousand Oaks: SAGE).

Craig, M. (1989) A Scenario For Human Exploration of the Moon and Mars, Presentation to Admiral Richard Truly, 13 June.

Craig, R. T. (2001). Communication. In T. O. Sloane *(ed.)*, *Encyclopedia of Rhetoric* (New York: Oxford University Press) pp. 125–137.

Craig, R. T. (2006). Communication as a practice. In G. J. Shepherd, J. St. John & T. Striphas *(eds.)*, *Communication as — : Perspectives on Theory* (Thousand Oaks, CA: Sage), pp. 38-47.

Cramer, P. (1998) Deep Environmental Politics: The Role Of Radical Environmentalism In Crafting American Environmental Policy. (Westport, CT: Praeger Publishers.)

Crane, A. & Matten, D. (2007) Business Ethics (New York: Oxford University Press), 2nd Edition.

Crate, S. (2009) *Gone the bull of winter: grappling with the cultural implications of and anthropology's role(s) in global climate change,* Presentation at CLIMATE CHANGE: Global Risks, Challenges & Decisions in Panel on Cultures, Values and World Perspectives as Factors in Responding to Climate Change, Copenhagen, 12 March.

Crawley, J. (2007) Toyota Not Among Carmakers Invited To White House, *Reuters* 25 March, Available <http://www.reuters.com/article/idUSN2341825420070325>, Last accessed 16 December 2010.

Crooks, E. (2001) Prizes for saving lives: Drug companies will not develop new vaccines unless they are rewarded for it, *Financial Times*, 25 April, Original unavailable, Copy available at <http://www.cid.harvard.edu/cidinthenews/articles/FT_042701.html>, Last accessed 16 December 2010.

Croteau, D. & Hoynes, W. (2003) Media society: industries, images, and audiences (Thousand Oaks, CA USA: Pine Forge Press) 3rd Edition.

Csíkszentmihályi, M. (1990) Flow: The Psychology of Optimal Experience (New York: Harper Perennial).

Cullinan, C. (2008) If Nature Had Rights, *Orion Magazine*, January/February, Available <http://www.orionmagazine.org/index.php/articles/article/500>, Last accessed 16 December 2010.

Dake, K. (1992) Myths of nature: Culture and the social construction of risk, *Journal of Social Issues*, Vol. 48, pp. 21-37.

Daly, H. (1991) Steady-State Economics (Washington, D.C.: Island Press), Chapter 5.

Darwin, C. (1859) On the Origin of Species by Means of Natural Selection, Available <http://darwin-online.org.uk/converted/pdf/1859_Origin_F373.pdf>, last accessed 9 June 2015.

De Cock Buning, T.J, Regeer, B.J., & Bunders, J.F.G. (2008) Biotechnology and Food: Towards a Societal Agenda in 10 Steps (The Hague, Netherlands: Advisory Council for Research on Spatial Planning, Nature and the Environment (RMNO)).

De Landa, M. (2006) A New Philosophy of Society: Assemblage Theory and Social Complexity (New York: Continuum).

De Madariaga Mathews, N. H. (1996) Francis Bacon – The History of A Character Assassination, (New Haven, CT, USA: Yale University Press).

De Swaan, A. (2006) *Language Conflicts,* Lecture, Culture, Identity, Violence Seminar Series, Universiteit van Amsterdam, Amsterdam.

De Waal, F. (2005) Our Inner Ape: A Leading Primatologist Explains Why We Are Who We Are (New York: Riverhead Trade).

Deci, E. L., & Ryan, R. M. (2000) The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior, *Psychological Inquiry*, Vol. **11**, pp. 227-268.

Delaware North (2003) *GreenPath*, Presentation at Greenbuild Conference, Pittsburgh.

Demko (2006) Billion Dollar Dreamer (Minneapolis: City Pages), 8 November, Available <http://www.citypages.com/2006-11-08/news/billion-dollar-dreamer>, Last accessed 16 December 2010.

Denny, F. (1998) Islam and Ecology: A Bestowed Trust, Inviting Balanced Stewardship, *Earth Ethics* Vol. **10** (1).

Derrida, J. (1966 (1978)) Writing and Difference (*trans*.) Alan Bass (London: Routledge).

Descartes, R. (1637 (2008)) Discourse On The Method Of Rightly Conducting The Reason, And Seeking Truth In The Sciences, The Project Gutenberg EBook, Available <http://www.gutenberg.org/files/59/59-h/59-h.htm>, Last accessed 25 September 2015.

Devall, B. & Sessions, G. (1985) Deep Ecology: Living as if Nature Mattered (Salt Lake City, UT USA: Peregrine Smith).

Dewan, S. (2009) A Slowdown That May Slow Us Down, *New York Times*, 1 March, Available <http://www.nytimes.com/2009/03/01/business/worldbusiness/01iht-01dewan.20498336.html>, Last accessed 16 December 2010.

Dicke, W.M.. (2001) Bridges and Watersheds: A narrative analysis of water management in the Netherlands, England and Wales, PhD dissertation, University of Amsterdam.

Dilthey, W. (1910 (2002)) The formation of the historical world in the human sciences (*eds*.) Makkreel, R. A. & Rodi, F. (Princeton: Princeton University Press).

Dilthey, W. (1923 (1988)) Introduction to the human sciences: An attempt to lay a foundation for the study of society and history (*trans*.) Betanzos, R. J. (Detroit, MI USA: Wayne State University Press).

Djoghlaf, A. (2008) Secretariat of the Convention on Biological Diversity: United Nations Environment Programme on Meeting the 2010 biodiversity target: A contribution to poverty alleviation and the benefit of life on Earth, IUCN World Conservation Forum, Barcelona, 8 October.

Dobson, A. (2004) Citizenship and the Environment (New York: University Press USA).

Douglas, M. & Wildavsky, A. (1982) Risk and Culture, An Essay on the Selection of Technological and Environmental Dangers (Berkeley: University of California Press).

Dounias, E. (2009) The sentinel key role of indigenous peoples in the assessment of climate change effects on tropical forests, Presentation at CLIMATE CHANGE: Global Risks, Challenges & Decisions, Panel on Cultures, Values and World Perspectives as Factors in Responding to Climate Change, Copenhagen, 12 March.

Downs, D. (2002) Representing Gun Owners : Frame Identification as Social Responsibility in News Media Discourse, *Written Communication*, Vol. **19**, pp. 44 – 75.

Doyle, J. (2007a) *Acclimatising nuclear? Climate change, nuclear power and the reframing of risk in the media*, Presentation at IAMCR Working Group on Environmental Issues, Science and Risk Communication, Paris, 23 July.

Doyle, J. (2007b) Picturing the Clima(c)tic: Greenpeace and the Representational Politics of Climate Change Communication, *Science as Culture*, Vol. 16, (2), pp. 129 – 150.

Doyle, M. W. (1983) Kant, Liberal Legacies, and Foreign Affairs, Part 2, *Philosophy and Public Affairs*, Vol. **12** (4), 83– 95.

Driessen, P. (2003) Eco-Imperialism: Green Power Black Death (Bellevue, WA: Free Enterprise Press).

Dryzek, J. (1997) The Politics of the Earth, Environmental discourses (Oxford: Oxford University Press).

Dugger, C. (2004) The Food Chain: Survival Of The Biggest Supermarket Giants Crush Central American Farmers, New York Times, December 28, Available <http://www.nytimes.com/2004/12/28/international/americas/28guatemala>, Last accessed 6 April 2009.

Dunlap, R.E. & Van Liere, K.D. (1978) The new environmental paradigm, *Journal of Environmental Education* Vol. 9, pp. 10-19.

Dunlap, R.E., Van Liere, K.D., Mertig, A.G. & Jones, R.E. (2000) New trends in measuring environmental attitudes: measuring endorsement of the new ecological paradigm: a revised NEP scale, *Journal of social issues*, Vol. 56, (3), pp. 425-442.

Durning, A.T. (1993). Supporting Indigenous Peoples in Brown, *(ed.)* L. State of the World 1993 (Washington, DC: World Watch Institute), p. 80-100.

DuVal, K. (2009) Life, Liberty and Benign Monarchy, *New York Times*, 3 July, Available <http://www.nytimes.com/2009/07/03/opinion/03duval.html>, Last accessed 16 December 2010.

Earth Day Network (2006) A New Climate Change National Poll – Politics of Global Warming on Election Day, Available <http://www.earthday.net/news/11-02-06_release.aspx>, Last accessed 16 December 2006.

Easterlin, R. A. (1995) Will raising the incomes of all increase the happiness of all?, Journal of Economic Behavioral Organization. Vol. **27**, pp. 35–47.

Easterlin, R. A. (2010) Happiness, Growth, and the Life Cycle (Oxford: Oxford University Press).

Economist (2009) A Giant Falls, 4 June, Available <http://www.economist.com/node/13782942>, Last accessed 24 January 2011.

Economist (2010) Government Motors No More, 19 August, Available <http://www.economist.com/node/16846494>, Last accessed 24 January 2011.

Edelman, M. (1964) The Symbolic Uses of Politics (Urbana and Chicago: University of Illinois Press).

Edelman, M. (1985) Political Language and Political Reality, *PS: Political Science and Politics*, Vol. **18** (1), pp. 10-19.

Ehrlich, P. R., (2000) Human Natures: Genes, Cultures, and the Human Prospect (Washington, DC: Island Press)

Eisenberg, D. & Reed, W. (2003) *Regenerative Design: Toward the Re-Integration of Human Systems with Nature*, Presentation at Greenbuild Conference, Pittsburgh.

Elliott, M. (2007) Introduction from the Editor: Heroes of the Environment Special Issue, TIME Magazine International, 29 October.

Ember, C. & Ember, M. (1992) Warfare, Aggression, and Resource Problems: Cross-Cultural Codes, *Cross-Cultural Research* , Vol. 26 (1-4), pp. 169-226.

Entman (2006) Young Men of Color in the Media: Images and Impacts, Joint Center for Political And Economic Studies Health Policy Institute.

Environmental News Wire (2007) Ecuador Seeks Compensation to Leave Amazon Oil Undisturbed, 24 April, Available <http://www.ens-newswire.com/ens/apr2007/2007-04-24-04.asp>, Last accessed 31 January 2011.

Environmental News Wire (2010) Ecuador Agrees to Keep Amazon Eco-Treasure Free of Oil Drilling, Available <http://www.ens-newswire.com/ens/aug2010/2010-08-04-02.html>, Last accessed 31 January 2011.

Ereaut and Segnit (2006) Warm Words: How are we telling the climate story and can we tell it better?, *Institute for Public Policy Research*.

Ereaut and Segnit (2007) Warm Words II: How the climate story is evolving and the lessons we can learn for encouraging public action, *Institute for Public Policy Research*.

ETC Group (2008a) Patenting the "Climate Genes"…And Capturing the Climate Agenda, Group Communiqué, Ottawa, Canada, Vol. 99, May-June.

ETC Group (2008b) Who Owns Nature? Corporate Power and the Final Frontier in the Commodification of Life, Group Communiqué, Ottawa, Canada, Vol. 100, November.

Farnsworth, P. R. (1969) The Social Psychology of Music (Ames, Iowa: The Iowa State University Press).

Federal Ethics Committee on Non-Human Biotechnology (2008) The Dignity of Living Beings with Regard to Plants: Moral Consideration of Plants for their Own Sake, Bern, Switzerland, April.

Fellman, G. (1998) Rambo and the Dalai Lama: The Compulsion to Win and Its Threat to Human Survival (Albany, New York: State University of New York Press).

Ferguson, N. (2005) Sinking Globalization, *Foreign Affairs*, Vol. **84** (2), pp. 64-77.

Festinger, L. (1957) A theory of cognitive dissonance (Stanford: Stanford University Press).

Filipov, G. (2008) *Answer on WIPO's key issues*, Candidacy Statement for WIPO Director, 15 April, Available <http://www.ciel.org/Publications/WIPO_Filipov_15Apr08.pdf>, Last accessed 27 April 2009.

Ford, J. (2005) IMAGINE: A Design Ecology Community for Experiential Design, BRC Imaginations Arts, Amsterdam.

Ford, J. (2010) The role of culture in climate change policy making: Appealing to universal motivators to address a universal crisis, In Carvalho, A. (*ed.*) Communicating Climate Change: Discourses, Mediations and Perceptions. E-book. Braga: Centro de Estudos de Comunicação e Sociedade, Universidade do Minho.

Ford, J. (2011) Worldviews and Climate Change: Harnessing Universal Motivators to Enable an Effective Response, In Leal Filho, W. (*ed.*) "The Economic, Social and Political Elements of Climate Change" (Berlin: Springer Verlag), pp. 175-192.

Forest Trends, The Katoomba Group, and UNEP (2008) Payments for Ecosystem Services: Getting Started A Primer, Forest Trends & The Katoomba Group, Nairobi.

Foster, R. (2007) Why roses from Kenya are greener than the flowers from Amsterdam, *The Times*, 10 February, Available <http://www.timesonline.co.uk/tol/news/world/europe/article1362750.ece>, Last accessed 24 January 2011.

Frawley, D. (2000) How I Became a Hindu, *Voice of India*, New Delhi.

Freedman, J. (2002) Media violence and its effect on aggression.: Assessing the scientific evidence (Toronto: University of Toronto Press).

Friedman, M. (1962) Capitalism and Freedom (Chicago: University of Chicago Press).

Friedman, T. (1999) Foreign Affairs; Senseless in Seattle, *New York Times*, 1 December, Available <http://www.nytimes.com/1999/12/01/opinion/foreign-affairs-senseless-in-seattle.html?scp=1&sq=foreign%E2%80%93affairs%E2%80%93senseless%E2%80%93in%E2%80%93seattle&st=cse>, Last accessed 24 January 2011.

Friedman, T. (2000) The Lexus and the Olive Tree: Understanding Globalization (New York: Anchor Books).

Friedman, T. (2006) The World is Flat (New York: Farrar, Straus & Giroux).

Friedman, T. (2009a) The Inflection is Near?, *New York Times*, 7 March, Available <http://www.nytimes.com/2009/03/08/opinion/08friedman.html>, Last accessed 24 January 2011.

Friedman, T. (2009b) The Price is Not Right, *New York Times*, 31 March, Available <http://www.nytimes.com/2009/04/01/opinion/01friedman.html>, Last accessed 24 January 2011.

Friedman, T. (2009c) Swimming Without a Suit, *New York Times*, 21 April, Available <http://www.nytimes.com/2009/04/22/opinion/22friedman.html?_r=1>, Last accessed 24 January 2011.

Friends of the Earth International (2007) www.foei.org/en/publications/link/100/1819.html

Friends of the Western Buddhist Order (2007) Buddhism and the Green Life, Available <http://fwbo.org/articles/green_life.html>, Last accessed 16 December 2010.

Gandhi, M. K. (1959) The Moral Basis of Vegetarianism (Ahmedabad, India: Jitendra T Desai Navajivan Mudranalaya), Available: <http://www.mkgandhi.org/ebks/moralbasis_vegetarianism.pdf>, Last accessed September 28, 2015.

Gardenswartz, L., Rowe, A. Digh, P. & Bennet M. (2003) The Global Diversity Desk Reference: Managing an International Workforce (San Francisco, CA: Jossey-Bass).

Garman, J. (2006) Greenwash Exposed – BAA, 6 October, Available <http://www.turnuptheheat.org/?page_id=16>, Last accessed 16 December 2010.

GAVI Alliance (2009) What is an AMC?, Available <http://www.vaccineamc.org/about.html>, Last accessed 16 December 2010.

Geertz, C. (1957) Ritual and Social Change: A Javanese Example, *American Anthropologist*, Vol. 59 (1), pp. 32-54.

Geertz, C. (1973) Emphasizing Interpretation in The Interpretation of Cultures: Selected Essays (Basic Books: New York).

General Synod of the Church of Norway (2002) The General Synod's Resolution Document # Plen 4.3, Presentation to World Council of Churches, Geneva, 26 August – 3 September.

Gerbner, G. (2000) Marketing Global Mayhem *(ed.)* Weaver, G., *Culture, Communication and Conflict: Readings in Intercultural Relations* (Boston: Pearson Publishing), pp. 399-403.

Gergen, K. (1996) Social Psychology as Social Construction: The Emerging Vision *(eds.)* McGarty, C. & A. Haslam, The Message of Social Psychology: Perspectives on Mind in Society (Oxford: Blackwell).

Gerringer, S. (2006) Practical Campbell: Movies—Medium for Myth? (San Anselmo, CA USA: Joseph Campbell Foundation).

Gettleman, J. (2006) Annan Faults 'Frightening Lack of Leadership' for Global Warming, *New York Times*, 16 November, Available <http://www.nytimes.com/2006/11/16/world/16climate.html>, Last accessed 16 December 2010.

Gettleman, J. (2010) With Flights Grounded, Kenya's Produce Wilts, *New York Times*, 20 April, Available <http://www.nytimes.com/2010/04/20/world/africa/20kenya.html>, Last accessed 16 December 2010.

Ghetto Radio (2007) <http://ghettoradio.omroep.nl/page/intro_intro/myghetto/documentary

Gill, J., Williams, J.W., Jackson, S.T., Lininger, K.B., Robinson, G.S. (2009) Pleistocene Megafaunal Collapse, Novel Plant Communities, and Enhanced Fire Regimes in North America, *Science*, Vol. 326, pp. 1100-1103.

Gingrich, N. & Maple, T. (2007) A Contract With the Earth (Baltimore: Johns Hopkins University Press).

Giroux, H. (2000) Stealing Innocence: Corporate Culture's War on Children (New York: Palgrave).

Gladwell, M. (2000) The Tipping Point: How Little Things Can Make a Big Difference (New York: Little, Brown and Company)

Godden, L. (2000) Nature as Other: The Legal Ordering of the Natural World, *PhD Dissertation*, Griffith University, Melbourne.

Goldenberg, J. L., Pyszczynski, T., Greenberg, J., Solomon, S., Kluck, B., & Cornwall, R. (2001) I am not an animal: Mortality salience, disgust, and the denial of human creatureliness, *Journal of Experimental Psychology*, Vol. **130**, pp. 427-435.

Goldenberg, J. L, Pyszczynski, T., McCoy, S. K., Greenberg, J., & Solomon, S. (1999) Death, sex, love, and neuroticism: Why is sex such & problem!, *Journal of Personality and Social Psychology*, Vol. 77, pp. 1173-1187.

Goldenberg, S. (2007) Bush administration accused of doctoring scientists' reports on climate change: Inconvenient conclusions censored, hearing told: Researchers warned not to talk about global warming, *Guardian*, 31 January,

Available <http://www.guardian.co.uk/environment/2007/jan/31/usnews.frontpagenews>, Last accessed 16 December 2010.

Goldman Sachs (2007) Introducing GS Sustain, London, 22 June.

Gonzalez, C. (2000–2001) Beyond Eco-Imperialism: An Environmental Justice Critique of Free Trade, *Denver University Law Review*, Vol. 78, p. 981.

Gonzalez, C. (2006–2007) Genetically Modified Organisms and Justice: The International Environmental Justice Implications of Biotechnology, *Georgetown International Environmental Law Review*, Vol. 19, pp. 583-642.

Goodman, A. (2009) Congre$$, Heal Thyself, *truthdig*, 16 June, Available <http://www.truthdig.com/report/item/20090616_congress_heal_thyself>, Last accessed 16 December 2010.

Gore, A. (2006) An Inconvenient Truth: The Planetary Emergency of Global Warming and What We Can Do About It, DVD, Paramount.

Gore, A. (2008) The Assault on Reason: How the Politics of Blind Faith Subverts Wise Decision Making (London: Bloomsbury Publishing).

Graham, J. R., Harvey, C. R. & Rajgopal, S. (2006) Value Destruction and Financial Reporting Decisions, *Financial Analyst Journal*, Vol. 62 (6), pp. 27-39.

Gramsci, Antonio (1992). Buttigieg, Joseph A, (*ed.*) Prison Notebooks (New York City: Columbia University Press), pp. 233–38.

Granitas, A. (2005) Americans are Tuning Out the World, , *YaleGlobal*, 24 November, Available <http://yaleglobal.yale.edu/content/americans-are-tuning-out-world>, Last accessed 16 December 2010.

Greenberg, A.S. (2005) Manifest Manhood and the Antebellum American Empire (Cambridge: Cambridge University Press).

Greenfield, K. (2014) Corporate Citizenship: Goal or Fear?, *University of St. Thomas Law Journal,* Vol. 10: Iss. 4, Article 2.

Greenpeace (2007a) Exxon Secrets www.exxonsecrets.org

Greenpeace (2007b) ExxonMobil's Continued Funding of Global Warming Denial Industry, *Greenpeace USA Research Department*, Washington.

Greenpeace (2008) New Zealand's Expanding Carbon Footprint Report, Available http://www.greenpeace.org/raw/content/new-zealand/press/reports/expanding-carbon-footprint-report.pdf>, Last accessed 4 November 2009.

Greenpeace (2010) Executive Summary: Koch Industries: Secretly Funding the Climate Denial Machine, *Greenpeace USA Research Department* , Washington, 30 March.

Griffin, C. (2004) An Introduction to Biophilia and the Built Environment, *Rocky Mountain Institute Newsletter*, Spring

Griffiths, P. (2007) Missing Girl Web Site Gets 55 Million Hits, Reuters, 18 May Available <http://news.cnet.com/2100-1038_3-6184947.html>, Last accessed 16 June 2007.

Grinde, B. (2008) *Darwinian Happiness: An Evolutionary Approach to Quality of Life Presentation,* Presentation at Thoughts on Happiness Symposium, Oegstgeest, Netherlands, 5 November.

Grove, L. & Chernaik, M. (2009) Findings from a Recent Survey Show Widespread Support for a Public Health Care Option (Portland, OR USA: Grove Insight, Ltd.) 30 January.

Grove, R. (2001) Atavistic mistakes: The Ecological Indian, *The Times Higher Education*, 22 June, Available <http://www.timeshighereducation.co.uk/story.asp?storyCode=162887&sectioncode=6>, Last accessed 31 January 2011.

Guiderdoni, B. (2006) Modern cosmology and the quest for meaning: a dialogue on the road to knowledge, In Staune, J. (*ed.*) Science & the search for meaning: perspectives from international scientists (West Conshohocken, PA USA: Templeton Foundation Press), pp. 163-173.

Guilmette, Jean-H., (2007) The Power of Peer Learning: Networks and Development Cooperation, *Academic Foundation and International Research Development Centre*.

Gumbel, A. (2007) One Woman, Fighting to Save Her People From Extinction, *The Independent*, 24 February, Available <http://www.independent.co.uk/environment/climate-change/one-woman-fighting-to-save-her-people-from-extinction-437633.html>, Last accessed 16 December 2010.

Guterl, F. (2010) Iceberg Ahead: Climate scientists who play fast and loose with the facts are imperiling not just their profession but the planet, *Newsweek*, 19 February, Available <http://www.newsweek.com/2010/02/18/iceberg-ahead.html>, Last accessed 31 January 2011.

Gwynne, P. & Heebner, G. (2002) Laboratory Technology Trends: Drug Discovery 4: Protecting the Assets, *Science*, Vol. 297, pp. 2083, 2086.

Habermas, J. (1991) The Structural Transformation of the Public Sphere: An Inquiry into a category of Bourgeois Society (*trans.*) Burger, T. & Lawrence, F. (Cambridge, MA: MIT Press).

Habermas, J. (1996) Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy (*trans.*) Rehg. W., (Cambridge, MA: MIT Press).

Hackett, C. (1926) Agrarian Reforms in Mexico, Proceedings of the Academy of Political Science: International Problems and Relations, Vol. 12 (1), pp. 339-346.

Haidt, J. (2006) The Happiness Hypothesis: Finding Modern Truth in Ancient Wisdom (New York: Basic).

Haidt, J., & Joseph, C. (2006). The moral mind: How 5 sets of innate moral intuitions guide the development of many culture-specific virtues, and perhaps even modules. In P. Carruthers, S. Laurence, and S. Stich (*eds.*) The Innate Mind, Vol. 3. New York: Oxford, pp. 367-391.

Hajer, M. (1996) Ecological Modernisation as Cultural Politics In *(ed.)* Lash, S., Szerszynski, B. & Wynne, B. *Risk, Environment & Modernity: Towards a New Ecology* (London: Sage), pp. 246 - 268.

Hajer, M. (2006) Doing Discourse Analysis: Coalitions, Practices, Meaning, in: M. van den Brink & T. Metze *(eds.)* Words Matter in Policy and Planning – Discourse Theory And Method in the Social Sciences, *Netherlands Geographical Studies* Vol. 344, pp. 65-74.

Hajer, M. (2010) Definition of Discourse Analyse, Available http://www.-maartenhajer.nl/?page_id=14, Last Accessed 24 September 2015.

Hajer, M. & Versteeg, W. (2005) A Decade of Discourse Analysis of Environmental Politics: Achievements, Challenges, Perspectives, *Journal of Environmental Policy & Planning,* Vol. 7 (3), pp. 175-184.

Halim, S. (2003) Islam & Pluralism: A Contemporary Approach (Qatar: IslamOnline.net), 8 May.

Hall, E. (1976) Beyond Culture (New York: Doubleday).

Hall, E. & Hall, E. (1976) How Cultures Collide in Weaver, G. *(ed.) Culture, Communication and Conflict: Readings in Intercultural Relations* (Boston: Pearson Publishing), pp. 9-16.

Hall, S. (1979) Culture, the Media, and the 'Ideological Effect', In *(eds.)* Curran, J., Gurevitch, M. & Woollacott, J. *Mass Communication and Society* (Beverly Hills: Sage) Vol. 3, pp. 15-48.

Hallin, D. (1992) Sound Bite News: Television Coverage of Elections, 1968-1988, *Journal of Communication*, Vol. **42** (2), pp. 5-24.

Hamelink, C. (1994) The Politics of World Communication (London: Sage Publications Ltd).

Hamelink, C. (2004a) Did WSIS Achieve Anything At All?, *Gazette*, Vol. **66** (3–4), pp. 281–290.

Hamelink, C. (2004b) Human Rights For Communicators (Cresskill, NJ USA: Hampton Press).

Hamelink, C. (2006a) *Globalisation, Governance, Human Rights and Global Communication Seminar*, Lecture, University of Amsterdam, Amsterdam, 19 September.

Hamelink, C. (2006b) *Globalisation Of Culture: The Violent And Non-Violent Search Of Identity*, Presentation, Culture, Identity, Violence Seminar Series, University of Amsterdam, Amsterdam, 23 March.

Hamelink, C. (2010) Transdisciplinary Approaches, Personal Communication, 17 March.

Hamer, E. & Anslow, M. (2008) 10 reasons why organic can feed the world, *The Ecologist*, 3 January, Available <http://www.theecologist.org/trial_investigations/268287/10_reasons_why_organic_can_feed_the_world.html>, Last accessed 16 December 2010.

Hanley, C. (2008) We blew it' on global food, says Bill Clinton, *Associated Press*, 23 October, <http://www.cbsnews.com/stories/2008/10/23/world/main4542268.shtml>, Last accessed 16 December 2010.

Hansen, J. (2007) *Tipping Points*, Presentation, American Geophysical Union Fall Meeting, San Francisco, 13 December.

Hansen, J. (2008) *Climate Threat to the Planet: Implications for Energy Policy*, Presentation, Pacific Congress on Marine Science and Technology (PACON), Honolulu, Hawaii, 3 June.

Hansen, J. (2009) *Introduction*, Presentation at CLIMATE CHANGE: Global Risks, Challenges & Decisions in Panel on Climate Change and Air Pollution: The Role of non-CO2 Atmospheric Pollutants (CH4, Halocarbons, N3), Ozone, Aerosols) in Climate Stabilization Part I, Copenhagen, 11 March.

Hansen, J, Sato M., Kharecha, P., Beerling, D. Berner, R. Masson-Delmotte, V., Pagani, M. Raymo, M., Royer, D.L., and Zachos, J.C. (2008) Target atmospheric CO2: Where should humanity aim?, *Open Atmospheric Science Journal*, Vol. 2, pp. 217–31.

Hardin, G. (1975) Review of "Should Trees Have Standing?: Toward Legal Rights for Natural Objects by Christopher D. Stone", *BioScience*, Vol. 25 (5), pp. 330-331.

Hardisty, David, Eric J. Johnson, and Elke U. Weber (2009), A Dirty Word or a Dirty World? Attribute Framing, Political Affiliation, and Query Theory, Working paper, Department of Psychology, Columbia University.

Harley, R. (1993) Beat the System In *(eds.)* Bennett, T., Frith, S., Grossberg, L., Shepherd, J. & Turner, G. *Rock and Popular Music: Politics, Policies, Institutions* (London), pp. 210-30.

Harness, B. (2007) Discussion on Mythica Attraction, Telephone Interview, 12 September.

Harper, S. (2008) PM hails breakthrough on climate change at 2008 G8 Summit, Available <http://pm.gc.ca/includes/send_friend_eMail_print-.php?URL=/eng/media>, Last accessed 16 October 2008, 9 July.

Harris, P. (2008) Climate Change and Global Citizenship, *Law & Policy*, Vol. 30 (4), pp. 481-501.

Harris, R. (2007) Drought Forces Desert Nomads to Settle Down, NPR Morning Edition, 2 July, Available <http://www.npr.org/templates/story/story.php?storyId=11608264>, Last accessed 16 December 2010.

Harrison, P. (2006) Natural Theology, Deism, and Early Modern Science, in *Science, Religion, and Society: An Encyclopedia of History, Culture and Controversy*, Eisen, Arri, Laderman, Gary (*eds.*), M.E. Sharp, New York, 2006, Ch. 47, pp. 426-433.

Harrison, P. (2010) The Cambridge Companion to Science and Religion (*ed.*) Cambridge University Press.

Harrison, R. Newholm, T. & Shaw, D. (2005) The Ethical Consumer (London: Sage Publications).

Haub, C. (2003) 2003 World Population Data Sheet, Population Reference Bureau, Washington, DC.

Haught, J. (2010) Science, God and Cosmic Purpose, In *(ed.)* Harrison, P., *The Cambridge Companion to Science and Religion (*Cambridge, UK: CambridgeUniversity Press), pp. 260-277.

Havemann, J. (2007) Scientist accuses White House of 'Nazi' tactics, *Los Angeles Times*, 19 March, Original unavailable, Copy available at http://www.truth-out.org/article/scientist-accuses-white-house-nazi-tactics>, Last accessed 16 December 2010.

Hawken, P. (1993) Seattle from the Inside, *Aisling Magazine*, Available <http://www.aislingmagazine.com/aislingmagazine/articles/TAM27/Seattle.html>, Last accessed 16 December 2010.

Hawken, P. (1993) The Ecology of Commerce: A Declaration of Sustainability (New York: Harper Business).

Hawken, P. (2007) Blessed Unrest: How the Largest Movement in the World Came into Being and Why No One Saw It Coming (New York: Viking Penguin).

Hawken, P., Lovins, A. B., & Lovins, L. H. (1999) Natural Capitalism: The Next Industrial Revolution (New York: Hachette Book Group).

Hays, S. (1999 (1959)) Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920. (Pittsburgh: University of Pittsburgh).

Heerwagen, J. & Orians, G. (1993) Humans, Habitats and Aesthetics in Kellert, S. & Wilson, E.O. (1993) *The Biophilia Hypothesis* (Washington DC: Island Press) p. 138-172.

Hegeman, R. (2009) Kansas abortion doc killed in church, *Yahoo News*, 31 May, Available <http://news.yahoo.com/s/ap/20090531/ap_on_re_us/us_tiller_shooting>, Last accessed 16 December 2009.

Heilprin, J. (2009) US wants to move on climate change, *Associated Press*, 5 May, Available <http://www.star-telegram.com/462/v-print/story/1347563.html>, Last accessed 5 May 2009.

Heinz Center and CERES (2009) Resilient Coasts: A Blueprint for Action, H. John Heinz III Center for Science, Economics and the Environment and Ceres, Washington and Boston.

Henderson, J. & Smith, J. (2002) Academia, Industry, and the Bayh-Dole Act: An Implied Duty to Commercialize, *Center for Integration of Medicine and Innovative Technology (CIMIT)*, October.

Herman-Miller (2004) Evolutionary Psychology and Workplace Design, Doing What Comes Naturally.

Hernandez, R. (2012) Bloomberg Backs Obama, Citing Fallout From Storm, *NY Times*, 1 November, Available <http://www.nytimes.com/2012/11/02/nyregion/bloomberg-endorses-obama-saying-hurricane-sandy-affected-decision.html>, Last accessed, 13 January 2014.

Herndl, C. & Brown, S. (1996) Green Culture, Environmental Rhetoric in Contemporary America (Madison, WI USA: University of Wisconsin Press).

Hershfield, H., Min Bang, H., Weber, E.U. (2014) National Differences in Environmental Concern and Performance Are Predicted by Country Age, *Psychological Science*, Vol 25, pp. 152-160.

Hertsgaard, M. (1992a) Meanwhile, People Die, *The Independent*, 5 July, Available <http://www.independent.co.uk/arts-entertainment/meanwhile-people-die-for-a-week-they-captured-headlines-but-what-did-they-really-achieve-the-thousands-of-politicians-and-activists-who-met-to-save-the-world-at-the-uns-earth-summit-the-answer-for-all-the-fanfares-and-media-hype-may-turn-out-to-be-nothing-at-all-1531416.html>, Last accessed 16 December 2010.

Hertsgaard, M. (1992b) The View from 'El Centro del Mundo': Summing Up the Summit, *Amicus Journal*, Vol. 14, pp. 12-14.

Heschong Mahone Group (1999) Daylighting in Schools: An Investigation into the Relationship Between Daylight and Human Performance.

Hitchens, C. (2007) God Is Not Great: How Religion Poisons Everything (New York: Twelve Hachette Book Group).

Hofferth, S. & J. Sandberg (2001) Changes in American Children's Time, 1981–1997 *(eds.)* Hofferth, S.L. & T.J. Owens, Children at the Millennium: Where Have We Come From, Where Are We Going? (Oxford, England: Elsevier Science).

Hofstede, G. (2001) Culture's Consequences, Comparing Values, Behaviors, Institutions, and Organizations Across Nations (Thousand Oaks, CA: Sage Publications).

Hoijer, H. (1954) The Sapir-Whorf Hypotheses *(ed.)* Hoijer, H., Language in culture: Conference on the interrelations of language and other aspects of culture (Chicago: University of Chicago Press), pp 92-105.

Holleman, J. (2010) The greening of S.C.: Local food crops up: Market growing for fresh produce from area farmers, *The State*, 21 March, Available at <http://www.survive2thrive.net/2010/03/22/buy-locally-grown-produce/>, Last accessed 7 February 2014.

Hopkins, R. (2008) The Transition Handbook: from oil dependency to local resilience (White River Junction, VT USA: Chelsea Green).

Horst, H. (1996) De Lage Hemel (Schiedam: Scriptum Books).

Houghton, R. A. (2003) Revised estimates of the annual net flux of carbon to the atmosphere from changes in land use and land management 1850–2000, *Tellus B*, Vol. 55, pp. 378–390.

Houlgate, S. (1998) Hegel and the Philosophy of Nature (State University of New York Press).

Howard, S. (2001) Life, Lineage and Sustenance: Indigenous Peoples and Genetic Engineering: Threats to Food, Agriculture, and the Environment *(eds.)* Harry, D. & Shelton, B.L. (Nixon, NV USA: Indigenous Peoples Council on Biocolonialism) .

Hudson R. J. (1993) Origins of Wildlife Management in the Western World in Hawley A. W. L. (1993) Commercialization and Wildlife Management – Dancing With the Devil (Malabar, FL USA: Krieger Publishing Company), Vol. 5, p. 21.

Huffstutter, P.J. & Zajac, A. (2010) FTC files complaint over POM juice health claims, *Boston Herald*, 28 September, Available http://www.bostonherald.com/business/general/view.bg?articleid=1284869&srvc=rss>, Last accessed 5 January 2011.

Hulme, M. (2009) Why We Disagree About Climate Change: Understanding Controversy, Inaction and Opportunity (Cambridge, UK: Cambridge University Press).

Hulme, M. & Sheard, N. (1999) Climate Change Scenarios for Japan, Climatic Research Unit, Norwich, UK, October.

Hulme, M., Boykoff, M., Gupta, J., Heyd, T., Jaeger, J., Jamieson, D., Lemos, M.C., O'Brien, K., Roberts, T., Rockström, J., and Vogel, C. (2009) Conference Covered Climate from All Angles, *Science*, Vol. 324, pp. 881-2.

Hume, D. (1739 (2003)) A Treatise of Human Nature.

Hunt, M. (1994) The Story of Psychology (New York: Anchor Books).

Hunter, J. (1991) Culture Wars: The Struggle To Define America (New York: HarperCollins Publisher).

Huntington, S. (1993) The Clash of Civilizations?, *Foreign Affairs*, Summer, p. 22-49.

Huntington, S. (1998) The Clash of Civilizations and the Remaking of World Order (New York: Simon & Schuster).

Husband, W.B., (2006) 'Correcting Nature's Mistakes': Transforming the Environment and Soviet Children's Literature, 1928–1941, *Environmental History* Vol. 11 (2), pp. 300-318.

Inglehart, R., (2003) How Solid is Mass Support for Democracy—And How Can We Measure It?, *Political Science and Politics*, Vol. 36 (1), pp. 51-57.

Inglehart, R., Foa, R., Peterson, C. & Welzel, C (2008) Development, Freedom, and Rising Happiness: A Global Perspective (1981–2007), *Perspectives on Psychological Science* Vol. 4 (3), pp. 264–85.

Innovest (2007) Carbon Disclosure Project: Fortune 500 http://cdproject.net/download.asp?file=CDP5_FT500_Report.pdf.

Interbrand (2005) Going Global: Global Branding – Risks and Rewards (New York: Interbrand).

Interbrand (2010) Best Global Brands 2010.

International Alliance of Research Universities (2009) Key Messages from the Congress, 12 March, Available http://climatecongress.ku.dk/newsroom/congress_key_messages/>, Last accessed 10 April 2009.

International Assessment of Agricultural Knowledge, Science and Technology for Development (2008a) Global Summary for Decision Makers, Johannesburg, April.

International Assessment of Agricultural Knowledge, Science and Technology for Development (2008b) Overview And Structure, Available <http://www.agassessment.org/index.cfm?Page=Overview&ItemID=3>, Last accessed 23 October.

International Bank for Reconstruction and Development/World Bank (2005) World Development Indicators, Volume 2005.

International Energy Agency (2008) New Energy Realities: WEO Calls for Global Energy Revolution Despite Economic Crisis, Press Release, Paris, 12 November.

International Finance Corporation (2009) IFC's Vision, Values, & Purpose Statement, Available <http://www.ifc.org/ifcext/about.nsf/Content/Mission>, Last accessed 30 March 2009.

International Helsinki Federation for Human Rights (2003) Report on Norway, Available <http://www.ihf-hr.org/viewbinary/viewdocument.php?doc_id=2261>, Last accessed 12 June 2009.

International Monetary Fund (2008) Letter from IMF Managing Director Dominique Strauss-Kahn to the G-20 Heads of Governments and Institutions, Press Release, New York, 9 November.

International Monetary Fund (2009) Gross domestic product of Advanced economies, current prices in U.S. Dollars, World Economic Outlook Database, April Available <http://www.imf.org/external/pubs/ft/weo/2009/01/weodata/weoselgr.aspx>, Last accessed 18 June 2009.

Internet Movie Database (2014) All-Time Worldwide Box office, Available <http://www.imdb.com/boxoffice/alltimegross?region=world-wide>, Last accessed 10 February 2014.

IPCC (2001) Summary for Policymakers, In Climate Change 2001: Synthesis Report. A Contribution of Working Groups I, II, and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change (eds.) Watson, R.T. and the Core Writing Team (Cambridge, United Kingdom, and New York, NY, USA: Cambridge University Press).

IPCC (2007) Fourth Assessment Report Climate Change Synthesis Report, November.

IPCC (2012) Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (eds.) Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (Cambridge, UK, and New York: Cambridge University Press).

IPCC (2013) Summary for Policymakers, In Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (eds.) Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press).

Jacoby (2008) Talking to Ourselves, *Los Angeles Times*, 20 April, Available <http://www.latimes.com/news/opinion/la-op-jacoby20apr20,0,2950321.story>, Last accessed 21 April 2008.

James (2008) Leapfrogging in mobile telephony: A measure for comparing country performance, *Technological Forecasting and Social Change*, Vol. 76 (7), pp. 991-998.

Jaspers, T. (2007) Interview, 22 June.

Jervey, B. (2009) The Global Climate Movement Comes of Age, *GOOD*, 27 October, Available <http://www.good.is/post/the-global-climate-movement-comes-of-age/>, Last accessed 4 February 2011.

Johnson, C. (2009) Megafaunal Decline and Fall, *Science*, Vol. 326, p 1072-3.

Johnson, P. (1991) Darwin on Trial (Downers Grove IL USA: InterVarsity Press), Second edition, 1993.

Jung, C. G. (1936 (1969)) Archetypes and The Collective Unconscious (*trans.*) Hull, R.F.C. *Collected Works of C.G. Jung, Bollingen Series XX* (Princeton, N.J. USA: Princeton University Press), Volume **9:** 1.

Junger, S. (1997) The Perfect Storm: A True Story of Men Against the Sea (New York: HarperTorch).

Kahneman, D., Krueger, A., Schkade, D. Schwarz, N., Stone, A. (2004) Experience: The Day Reconstruction Method – A Survey Method for Characterizing Daily Life, *Science* Vol. 306, p. 1776.

Kale, D. (1994) Peace As An Ethic For Intercultural Communication *(eds.)* Samovar, L. & Porter, R. *Intercultural Communication: A Reader*. (Belmont: Wadsworth) p. 435-441.

Kant, I. (1784) An Answer to the Question: "What is Enlightenment?" (*trans. unknown*), Available http://www.english.upenn.edu/~mgamer/Etexts/kant.html>, Last accessed 16 December 2010.

Kant, I. (1785 (1949)) Fundamental Principles of the Metaphysics and Morals (*trans*.) Abbott, T. (Indianapolis, IN: Library of Liberal Arts/Bobbs-Merrill)

Kanter (2008) Europe Forcing Airlines to Buy Emissions Permits, *New York Times*, 25 October, Available <http://www.nytimes.com/2008/10/25/business/worldbusiness/25emissions.html>, Last accessed 16 December 2010.

Kasser, T. (2009) Shifting Values in Response to Climate Change *(eds.)* Engelman, R.., Renner, M., & Sawin, J. *State of the World: Into a Warming World* (New York: W. W. Norton), pp. 122-125.

Kasser, T. & Ryan, R. M. (1993) A Dark Side of the American Dream: Correlates of Financial Success as a Central Life Aspiration, *Journal of Personality and Social Psychology*, Vol **65** (2), pp. 410-422.

Kasser, T. & Ryan, R. M. (1996) Further Examining the American Dream: Differential Correlates of Intrinsic and Extrinsic Goals, *Personality and Social Psychology Bulletin*, Vol. **22**, pp. 280-287.

Kats, G., Alevantis, L., Berman, A., Mills, E. & Perlman, J. (2003) The Costs and Financial Benefits of Green Buildings: A Report to California's Sustainable Building Task Force.

Kellert, S. & Wilson, E.O. (1993) The Biophilia Hypothesis (Washington, D.C.: Island Press and Shearwater Books).

Kelly, G.A. (1955) The Psychology of Personal Constructs Volume 1 & 2 (New York: Norton).

Kelly, G.A. (1970) A Brief Introduction to Personal Construct Theory. In D. Bannister (*ed.*), Perspectives in Personal Construct Theory (London: Academic Press).

Kennedy, D. (2001) An Unfortunate U-Turn on Carbon, *Science,* Vol. 291 (5513), p 2515.

Killingsworth and Palmer (1992) Ecospeak: Rhetoric and Environmental Politics in America (Carbondale: Southern Illinois University Press).

Kim, D. (1994) Is Culture Destiny? The Myth of Asia's Anti-Democratic Values, *Foreign Affairs*, November/December.

Kingsolver, B. (2003) Small Wonder: Essays (New York: Harper Perennial).

Kingsolver, B. (2008) Animal, Vegetable, Miracle (New York: Harper Perennial).

Kivirist (2009) Victory Gardens: A Salute to Self-sufficiency, *Hobby Farm Home*, May-June, <http://www.hobbyfarms.com/crops-and-gardening/victory-gardens.aspx>, Last accessed 16 December 2010.

Klapp, O. (1969) Collective Search for Identity (New York: Holt, Rinehart and Winston).

Klein, J. (2009) Francis Bacon, In (*ed.*) Zalta, E. N., The Stanford Encyclopedia of Philosophy, Spring Edition.

Klein, N. (2002) No Logo: No Space, No Choice, No Jobs (New York: Picador).

Klein, N. (2007) The Shock Doctrine: The Rise of Disaster (New York: Penguin).

Kleinhaus, T. & Schenwar, M. (2008) Oaxaca's Government Land Grab, truthout.org, 8 July, Available <http://www.truth-out.org/article/oaxacas-government-land-grab>, Last accessed 16 December 2010.

Kluckhohn, C. & Strodtbeck, F. (1961) Variations in value orientations (Evanston, IL: Row, Peterson).

Kluckhohn, F. R. (1950) Dominant and Substitute Profiles of Cultural Orientations: Their Significance for the Analysis of Social Stratification, *Social Forces,* Vol. 28 (4), pp. 376-393.

Knight, C., Power, C. & Watts, I. (1995) The Human Symbolic Revolution: A Darwinian Account, *Cambridge Archaeological Journal* Vol. 5 (1), pp. 75-114.

Koh, H.H. (2005) America's Jekyll-and Hyde Exceptionalism. In American Exceptionalism and Human Rights *(ed.)* Ignatieff, M. (Princeton: Princeton University Press), pp. 111-144.

Kolmes and Butkus (2007) Science, Religion, and Climate Change Letter, *Science*, Vol. 316 (5824), pp. 540 – 542.

Kolsky Lewis, M. (2007) WTO Winners And Losers: The Trade And Development Disconnect, *Georgetown Journal Of International Law*, Vol. 39, pp. 165-98.

Korten, D, Perlas, N, and Shiva, V. (2002) Global Civil Society: The Path Ahead, The People-Centered Development Forum, 20 November, Available <http://www.pcdf.org/civilsociety/path.htm>, Last accessed 21 October 2008.

Korten, D. (1995) When corporations rule the world (San Francisco: Berrett-Koehler Publishers).

Kosmin, B. & Keysar, A. (2009) American Religious Identification Survey: Summary Report, *Institute for the Study of Secularism in Society and Culture*, Trinity College, Hartford, Connecticut, March.

KPMG (2008) Climate Changes Your Business: KPMG's review of the business risks and economic impacts at sector level, Available: <https://www.kpmg.com/EU/en/Documents/Climate_Changes_Your_Business.pdf>, Last accessed 28 September 2015.

KPMG (2009) Thinking Beyond: KPMG International Annual Review 2008, Available <http://www.kpmg.com/SiteCollectionDocuments/IAR2008a.pdf>, Last accessed 22 April 2010.

Krause, D. (1995) The Art of War for Executives (New York: Perigee Trade).

Krauss, C. (2009) Big Oil Warms to Ethanol and Biofuel Companies, *New York Times*, 27 May, Available <http://www.nytimes.com/2009/05/27/business/energy-environment/27biofuels.html>, Last accessed 16 December 2010.

Krech, S. (2000) The Ecological Indian: Myth and History (New York: W.W. Norton).

Kristel, O. V., Scott, A. L., Szymanski, A. M., & Berent, M. (2012) Assessing Survey Evidence Regarding American Public Opinion Data About Climate Change. The Strategy Team, Ltd.

Kuhn, T. S. (1970) The Structure of Scientific Revolutions (Chicago: University of Chicago Press), 2nd edition.

Kuipers, G. (2007) The Globalization of Humor: Translation and Acculturation of American Television Comedy in France, Italy, the Netherlands and Poland, Presentation, Mobility Conference, Universiteit van Amsterdam, Amsterdam, 25 January

Kumar, S. & Fisk, W. (2002) The Role of Emerging Energy Efficient Technology in Promoting Workplace Productivity and Health: Final Report, Lawrence Berkeley National Laboratory, Washington and Berkeley, pp. 20-21.

Kung, C. (2000) Donation Presentation, Griffith University Multi-Faith Centre, Nathan, Queensland, Australia.

Küng, H. (2007) The Beginning of All Things: Science and Religion (*trans.*) Bowden, J. (Cambridge: William B Eerdmans).

LaDuke, W. (2007) Ricekeepers: A Struggle To Protect Biodiversity and a Native American Way of Life, *Orion Magazine,* July/August, Available <http://www.orionmagazine.org/index.php/articles/article/305>, Last accessed 16 December 2010.

Lakoff, G. (1987) Women, Fire and Dangerous Things (Chicago: University of Chicago Press).

Lakoff, G. (2006a) Thinking Points: Communicating Our American Values and Vision: A Progressive's Handbook (New York: Farrar, Straus and Giroux).

Lakoff, G. (2006b) Whose Freedom?: The Battle Over America's Most Important Idea (New York: Farrar, Straus and Giroux).

Lakoff, G. (2010) Untellable Truths, *The Huffington Post*, 10 December, Available http://www.huffingtonpost.com/george-lakoff/untellable-truths_b_794832.html>, Last accessed 12 January 2011.

Lakoff, G. & Johnson, M. (1980) Metaphors We Live By *(eds.)* O'Brien, J. & Kollock, P. (2001) The Production of Reality: Essays and Readings on Social Interaction (Pine Forge Press), 3rd edition, pp. 124 -134.

Langer, G. (2006) Poll: Public Concern on Warming Gains Intensity Many See a Change in Weather Patterns, *ABC News Internet Ventures* 26 March, Available <http://abcnews.go.com/Technology/GlobalWarming/story?id=1750492&tqkw=&tqshow=&page=1>, Last accessed 16 December 2010.

Larkin, C. & Stanford, D. (2009) Cheerios Cereal Isn't So Wholesome as Package Claims, *Bloomberg L.P.*, 12 May, Available <http://

www.bloomberg.com/apps/news?pid=newsarchive&sid=ajfZZtGpIemc>, Last accessed 16 December 2010.

Latour, B. & Woolgar, S. (1979) Laboratory Life: the Social Construction of Scientific Facts (Los Angeles, USA: Sage).

Latour, B. (2005) Reassembling The Social: An Introduction To Actor–Network–Theory (Oxford: Oxford University Press).

Launius, R. (2007) Former Chief Historian NASA, Book Review, Fleming, J. R. (2006) The Callendar Effect: The Life and Work of Guy Stewart Callendar (1898–1964): The Scientist Who Established the Carbon Dioxide Theory of Climate Change (Boston: American Meteorological Society), Available <http://www.amazon.com/review/R1UMSN1Q3DUQ0R>.

Law, Sung Ping (1986) The Regulation of Menstrual Cycle and its Relationship to the Moon, *Acta Obstetricia et Gynecologica Scandinavica*, Vol. 65 (1), pp. 45 – 48.

LeBaron, M. (2002) Bridging Troubled Waters (San Francisco: Jossey-Bass).

LeBaron, M. (2003a) Bridging Cultural Conflicts (San Francisco: Jossey-Bass).

LeBaron, M. (2003b) Culture-Based Negotiation Styles, In *(eds.)* Burgess, G. & Burgess, H., Beyond Intractability (Boulder, Colorado, USA: Conflict Research Consortium, University of Colorado).

LeBaron, M. (2006) *Bridging Cultural Conflicts: Imagining a Culturally Fluent Future*, Lecture, Culture, Identity, Violence Seminar Series, University of Amsterdam, Amsterdam.

Lee, L. (2008) Banks To Weigh CO2 Emissions In Power Lending, *Reuters*, 4 February, Available <http://www.reuters.com/article/idUSWNAS913620080205>, Last accessed 16 December 2010.

Lee, W. (2002), Dialogue on the Edges: Ferment in Communications and Culture *(eds.)* Collier et al, Transforming Communication about Culture, (Denver, CO USA: University of Denver), pp. 219-280.

LEED (2003) The Costs and Financial Benefits of Green Buildings: A Report to California's Sustainable Building Task Force, October.

Leiserowitz, A. Kates, R., and Parris, T. (2005) Do Global Attitudes and Behaviors Support Sustainable Development?, *Environment*, Vol. 47 (9), pp. 22-38.

Leiserowitz, A., Maibach, E. & Roser-Renouf, C. (2009) Global Warming's Six Americas, Yale Project on Climate Change and George Mason University Center for Climate Change Communication, 20 May.

Lepgold, J. & McKeown, T. (1995) Is American Foreign Policy Exceptional? An Empirical Analysis, *Political Science Quarterly* Vol. 110 (3), pp. 369-384.

LeVine, R. A. & Campbell, D. (1971/1972) Ethnocentrism: Theories of Conflict, Ethnic Attitudes and Group Behavior (New York: John Wiley).

Liljeblom, E. & Vaihekoski, M. (2009) Corporate Ownership and Managerial Short-termism: Results from a Finnish Study of Management Perceptions, *International Journal of Production Economics*, Vol. 117, pp. 427–438.

Lima, M.L. & Castro, P. (2005) Cultural theory meets the community: Worldviews and local issues, *Journal of Environmental Psychology,* Vol. 25, pp. 23–35.

Lima-Bessaa, K.M. & Mencka, C.F.M (2005) Skin Cancer: Lights on Genome Lesions, *Current Biology*, Vol. 15 (2), pp. R58-R61.

Littman, D. (1999) Universal Human Rights and "Human Rights in Islam", Midstream, February/March.

Locke, J. (1689 (2004)) Two Treatises of Government (Whitefish, Montana USA: Kessinger Publishing).

London School of Economics (2004) Definition of Civil Society, 22 March, Available <http://www.lse.ac.uk/collections/CCS/introduction>, Last accessed 19 March 2009.

Lorde, A. (1978) The Uses of the Erotic: The Erotic as Power, Paper presented at Fourth Berkshire Conference on the History of Women, Mount Holyoke College, August 25 *(ed.)* Abelove, H. (1993) The Lesbian and Gay Studies Reader (New York: Routledge), p. 339-343.

Loudon, T. (2009) US-Peru FTA Sparks Indigenous Massacre, *truthout*, 11 June, Available <http://www.truth-out.org/061109B>, Last accessed 16 December 2010.

Louv, R. (2007) Leave No Child Inside, *Orion Magazine,* March-April, Available <http://www.orionmagazine.org/index.php/articles/article/240>, Last accessed 16 December 2010.

Lovelock, J. (1979) Gaia: A New Look at Life on Earth (Oxford: Oxford University Press).

Lovins, A, (1976) Energy Strategy: The Road Not Taken?, *Foreign Affairs*, Vol. 55 (1), pp. 65-96.

Lovins, A. & Lovins, L. (1997) Climate: Making Sense and Making Money, Rocky Mountain Institute.

Luther, M. (1517) Disputation of Doctor Martin Luther on the Power and Efficacy of Indulgences, In Works of Martin Luther (*trans. & eds.*) Spaeth, A., Reed, L.D., Jacobs, H. E. (1915) (Philadelphia: A. J. Holman Company), Vol. **1**, pp. 29-38.

Lyerly, A., Steinhauser, K., Namey, E., Tulsky, J., Cook-Deegan, R., Sugarman, J., Walmer, D., Faden, R., and Wallach, E. (2006) Factors that affect infertility patients' decisions about disposition of frozen embryos, *Fertility and Sterility*, Vol. 85 (6), pp. 1623-1630.

Lytton, T.D. (2010) Banning front-of-package food labels: First Amendment constraints on public health policy, *Public Health Nutrition*, Forthcoming.

Mackenzie, C. & Stoljar, N. (2000) Relational Autonomy (New York: Oxford University Press US).

Magnin, T. (2006) Moral Philosophy A Space for Dialogue between Science and Theology, In Staune, J. (*ed.*) Science & the search for meaning: perspectives from international scientists (West Conshohocken, PA USA: Templeton Foundation Press), pp. 137-162.

Mahajan, S. (2004) Concentration ratios for businesses by industry in 2004, *Economic Trends* Vol. 635, pp. 25-47.

Maiteny P. (2000) The psychodynamics of meaning and action for a sustainable future, *Futures* Vol. 32, pp. 339–360.

Maleuvre, D. (2004) Beyond Culture, *Journal Of Human Values* Vol. 10 (2), pp. 131-141.

Malik, K. (2000) Universalism and Difference in Discourses of Race, *Review of International Studies*, Vol. 26, pp. 155-177.

Malik, K. (2007) China and Climate Change Session, Presentation at the United Nations Global Compact Leaders Summit, Geneva, 5 July.

Malone, D. M., and Foong-Khong, Y. (2003) Unilateralism & U.S. Foreign Policy: International Perspectives (Boulder, CO USA: Lynne Rienner Publishers).

Mander, J. (2006) Introduction: Globalization and the Assault on Indigenous Resources & Epilogue: Summary and Final Comments *(eds.)* Mander, J. & Tauli-Corpuz, V., Paradigm Wars: Indigenous Peoples' Resistance to Globalization (San Francisco: Sierra Club Books), pp. 3-12 & 223-227.

Mander, J. & Tauli-Corpuz, V. (2006) Paradigm Wars: Indigenous Peoples' Resistance to Globalization (San Francisco: Sierra Club Books).

Marin, A. (2009) Angry spirits of the land: cultural and ethical elements of climate change adaptation among Mongolian pastoralist nomads, Presentation at CLIMATE CHANGE: Global Risks, Challenges & Decisions in Panel on Cultures, Values and World Perspectives as Factors in Responding to Climate Change, Copenhagen, 11 March.

Markham, V. & Steinzor, N. (2006) U.S. Reports on Population and the Environment, Center for Environment and Population, New Canaan, CT USA.

Marland, G., Boden, T.A. & Andres, R. J. (2004) Global, Regional, and National Fossil Fuel CO_2 Emissions, *Trends: A Compendium of Data on Global Change,* Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy, Oak Ridge, Tenn., U.S.A..

Marsh, C. (2007) God and country: What it means to be a Christian after George W. Bush, *Boston Globe*, 8 July, Available <http://www.boston.com/news/globe/ideas/articles/2007/07/08/god_and_country>, Last accessed 16 December 2010.

Martin, J. & Nakayama, T. (2003) Intercultural Communication in Contexts (New York: McGraw-Hill Humanities/Social Sciences/Languages).

Maslow, A. (1954) Motivation and Personality (New York: Harper and Rowe).

Maslow, A. (1964 (1994)) Religions, Values, and Peak Experiences (New York: Penguin Books).

May, R. (2007) The world's problem, *Times Online*, 4 April, Available <http://tls.timesonline.co.uk/printFriendly/0,,2180-23215-2633036-2321>, Last accessed 16 December 2010.

McCain-Palin (2008) McCain-Palin on Climate Change, 26 September 2008.

McDonald, K. (2008) After Citizenship? Action and Ethics in Contemporary Social Movements, presented at Centre for Research on Socio-Cultural Change Conference, Oxford, 5 September.

McDonough Architects (1992) Hannover Principles, Design for Sustainability, Hannover, Germany.

McDonough, W. & Braungart, M. (2002) Cradle to Cradle: Remaking the Way We Make Things (New York: North Point Press).

McFague, S. (1991) An Earthly Theological Agenda, *The Christian Century*, 2-9 January, pp. 12-15.

McFaul, M. (2004) Democracy Promotion as a World Value, *The Washington Quarterly*, Vol. **28** (1), pp. 147–163.

McGrath, A.E., (1993) Christian Theology: An Introduction (Oxford: Blackwell).

McKibben, B. (1989) The End of Nature (New York: Random House).

McKibben, B. (1995) Hope, Human and Wild: True Stories of Living Lightly on the Earth (Saint Paul, MN, USA: Hungry Mind Press).

McKibben, B. (2007) Deep Economy: The Wealth of Communities and the Durable Future (New York: Times Books).

McKibben, B. (2010) Why the World Needs to Rise to the Challenge of the Climate Crisis, Presentation at World Affairs Council, San Francisco, 21 April.

McKinsey & Co. (2007) Reducing U.S. Greenhouse Gas Emissions: How Much at what cost?, December.

McNeill, D. (2000) The Face: A Natural History (USA: Back Bay Books).

McPhee, J. (1989) The Control of Nature (New York: Farrar, Straus and Giroux).

Mead, M. (1956) New Lives for Old: Cultural Transformation in Manus, 1928-1953 (New York: HarperCollins).

Mead, M. (1970) A Study of the Generation Gap (Garden City, NY: National History Press/Doubleday & Company).

Memmott, C. (2005) 'Left Behind' Series: Like Manna from Heaven, *USA Today* 28 February, Available <http://www.usatoday.com/life/books/news/2005-02-28-left-behind_x.htm>, Last accessed 16 December 2010.

Merriam-Webster (2007) Definition of Culture, Available <http://www.webster.com/dictionary/culture>, Last accessed 24 September 2015.

Metro (2004a) In Principe Moet Je Alles Kunnen Zeggen, 25 November, p. 17.

Metro (2004b) Doodswens Bestraffen, 25 November, p. 1.

Milch, K.F., Weber, E.U., Appelt, K.C., Handgraaf, M.J.J. & Krantz, D.H. (2009) From Individual Preference Construction to Group Decisions: Framing Effects and Group Processes, *Organizational Behavior and Human Decision Processes*, Vol. 108, pp. 242–255.

Millennium Ecosystem Assessment Board (2005) Living Beyond Our Means: Natural Assets and Human Well-Being Synthesis Report, *United Nations Environment Program*, Geneva.

Miller, G. H., Fogel, M. L., Magee, J. W., Gagan, M. K., Clarke, S., and Johnson, B. J. (2005) Ecosystem Collapse in Pleistocene Australia and a Human Role in Megafaunal Extinction, *Science* Vol. 309 (5732), pp. 287-290.

Miller, J. D. (2010) Detours for Perishable Goods, Wall Street Journal, 20 April, Available <http://online.wsj.com/article/SB10001424052748703757504575194122549226724.html?mod=WSJ_-World_MIDDLENews>, Last accessed 16 December 2010.

MIT Energy Initiative (2010) Shell Partners with MIT to Pursue New Energy Technology Solutions, 22 October, Available <http://web.mit.edu/mitei/news/spotlights/shell-mit.html>, Last accessed 6 January 2011.

MIT News (2008) Major discovery' from MIT primed to unleash solar revolution: Scientists mimic essence of plants' energy storage system, Press Release, MIT News Office, 31 July, Available <http://web.mit.edu/newsoffice/2008/oxygen–0731.html>, Last accessed 15 December 2010.

Mitchell, D. (2009) Defending Cheerios, Cereal of Liberty, 13 May, Available <http://www.reuters.com/article/bigMoney/idUS378866004420090513&cid=1350640210&ei=cIMLStyuBs3okAXMjvX6Bg&usg=AFQjCNEamANFsMYVt1Gy7sYLNrwL3pzB1A>, Last accessed 20 May 2009.

Mittermeier, R.A., Goettsch Mittermeier, C., and Robles Gil, P.E. (1997) Megadiversity: Earth's Biological Richest Countries of the World, CEMEX: Mexico City.

Mittermeier, R.A., Goettsch Mittermeier, C., and Kormos, C. (2001) Setting Priorities for Saving Life on Earth: Megadiversity, Countries, Hotspots and Wilderness (Tokyo: Areas Asahi Glass Foundation).

Mjøs, O. (2007) Nobel Peace Prize 2007, Presentation Speech, *Nobel Foundation*, Oslo, 10 December.

Mohin, T. (2006) Calling a Bluff: 'A Call to Truth' is Convenient – For Oil Companies, *Center for American Progress*, Washington.

Molina, M. & Rowland, F. (1974) Stratospheric Sink For Chlorofluoromethanes-Chlorine Atom Catalysed Destruction Of Ozone, *Nature,* Vol. 249, pp. 810–812.

Monbiot, G. (2006) On The Flight Path To Global Meltdown, *Guardian*, 21 September, Available <http://www.guardian.co.uk/environment/2006/sep/21/travelsenvironmentalimpact.ethicalliving>, Last accessed 15 December 2010.

Montagu, A. (1988) Growing Young (Westport, CT: Bergin & Garvey Second Edition).

Mooney, C. (2005) Some Like It Hot, *Mother Jones*, May, Available <http://motherjones.com/environment/2005/05/some-it-hot>, Last accessed 15 December 2010.

Moore, R. (1997) The Need for Nature: A Childhood Right, *Social Justice*, Vol. 24 (3), pp. 203 – 220.

Moore, R. & Cosco, N. (2007) What Makes A Park Inclusive And Universally Designed? A Multi-Method Approach *(eds.)* Ward Thompson, C. & Travlou, P., Open Space People Space (London: Taylor and Francis).

Moore, R. & Wong, H.H. (1997) Natural Learning: : The Life History of an Environmental Schoolyard: Creating Environments for Rediscovering Nature's Way of Teaching (Berkeley, CA USA: MIG Communications).

Moors, A. (2007) Selling Islamic Fashion Through Internet: Commerce, Religion and Aesthetics, Presentation at Mobility Conference, University of Amsterdam, Amsterdam, 25 January.

Morris, J. & Boone, M.A. (1998) The Effects of Music on Emotional Response, Brand Attitude, and Purchase Intent in an Emotional Advertising Condition, *Advances in Consumer Research*, Vol. 25, pp. 518-527.

Morrison (2006) Ask an Astrobiologist, 12 June, Available <http://astrobiology.nasa.gov/ask-an-astrobiologist/question/?id=1522>, Last accessed 4 January 2011.

Moskin, J. (2010) Durham, a Tobacco Town, Turns to Local Food, *New York Times*, , April 21, Available http://www.nytimes.com/2010/04/21/dining/21carolina.html?scp=4&sq=local%20food&st=cse, Last accessed 7 February 2014.

Motterlini, M. (2002) Professor Lakatos Between the Hegelian Devil and the Popperian Deep Blue Sea. In *(ed.)* Kampis, G, Kvasz, L. & Stöltzner, M. "Appraising Lakatos: mathematics, methodology, and the man" (Dordrecht, Netherlands: Kluwer Academic Publishers), pp. 23 – 52.

Moustakas, C.E. (1990) Heuristic Research: Design, Methodology, and Applications (Thousand Oaks: Sage).

Moyers, B. (2006) Is God Green?, Public Broadcasting System, Available http://www.pbs.org/moyers/moyersonamerica/green/>, Last accessed 4 January 2011.

Müller, B. (2002a) Deliberative Justice: Where justice and realism meet: A climate change solution, interviewed by Caspar Henderson, *openDemocracy Ltd,* 23 July, Available <http://www.opendemocracy.net/globalization-climate_change_debate/article_252.jsp>, Last accessed 18 September 2008.

Müller, B. (2002b) Equity In Climate Change The Great Divide: Executive Summary, Oxford Institute for Energy Studies, September.

Müller, B., Höhne, N., and Ellermann, C. (2007) Differentiating (Historic) Responsibilities for Climate Change, Energy and Environment Paper, Oxford Institute for Energy Studies, October.

Müller, F. M. (1862) The Science Of Language: Delivered at the Royal Institution of Great Britain in April, May, and June 1861 (New York: Charles Scribner).

Murdock, G. (1945) The common denominator of cultures In *(ed.)* Linton, R. "The science of man in the world of crisis" (New York: Columbia University Press).

Museum of World Culture (2009) Collections and Conservation, Available <http://www.worldculture.se/smvk/jsp/polopoly.jsp?d=859&a=4053&l=en_US>, Last accessed 2 February 2009.

Mydans, S. (2007) Monks Are Silenced, and for Now, Internet Is, Too, *New York Times,* 4 October, Available http://www.nytimes.com/2007/10/04/world/asia/04info.html>, Last accessed 5 January 2011.

Nabhan, G. P. (2001) Coming Home to Eat: The Pleasures and Politics of Local Food (New York: W. W. Norton).

Nader, R. (2000) Cutting Corporate Welfare (New York: Seven Stories Press).

Næss, Arne (1973) The Shallow and the Deep, Long-Range Ecology Movement, *Inquiry* Vol. **16**, pp. 95-100.

Naipaul, V.S. (1990) Wriston Lecture: Our Universal Civilization, *Manhattan Institute*, 30 October.

Najam, A. (2005) Developing Countries and Global Environmental Governance: From Contestation to Participation to Engagement, *International Environmental Agreements: Policy, Law, and Economics*, Vol. **5** (3): 303–321.

Nakamura, J., and Csíkszentmihályi, M. (2002) The construction of meaning through vital engagement in *(eds.)* Keyes, C. & Haidt, J. Flourishing (Washington, DC: American Psychological Association Books), pp. 83-104.

National Academy of Sciences (1999) Science and Creationism: A View from the National Academy of Sciences, Steering Committee on Science and Creationism, Washington D.C., etSecond Edition.

National Council of Churches Eco-Justice Programs (2007) <http://www.nccecojustice.org/godmandate.htm.

Nature (2004) Leapfrogging the power grid, *Nature,* Vol. **427** (6976): 661.

Nestle, M. (2011) National nutrition issues for 2011, *San Francisco Chronicle*, 2 January, Available http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2010/12/31/FD221GV6CC.DTL>, Last accessed 5 January.

Neubert, F.X., Mars, R.B., Thomas, A.G., Sallet, J. and Rushworth, M.F.S. (2014) Comparison of Human Ventral Frontal Cortex Areas for Cognitive Control and Language with Areas in Monkey Frontal Cortex, *Neuron*, Vol. **81**: 3, pp. 700-713.

Nevejan, C. (2007) Presence and the Design of Trust, PhD Dissertation, University of Amsterdam.

Neverla, I. (2007a) *Storms as Media-Drama: Reconstructing the Public Discourse on Climate-Change*, Presentation at IAMCR Working Group on Environmental Issues, Science and Risk Communication, Paris, 23 July.

Neverla, I. (2007b) *The Climatic Turn: How and Why Journalism has Discovered Climate Change*, Presentation at Communicating Climate Change Conference, University of Braga, Portugal, 19 November.

New Economics Foundation (2008) Happy Planet Index, <http://www.happyplanetindex.org/listactual.htm.

New Scientist (1992) Vatican Admits Galileo was Right, 7 November, Available <http://www.newscientist.com/article/mg13618460.600-vatican-admits-galileo-was-right-.html>, Last accessed 4 January 2011.

New Scientist (2007) International climate angst is growing, 24 February, Available <http://www.newscientist.com/article/mg19325923.500-international-climate-angst-is-growing.html>, Last accessed 4 January 2011.

New York Times (2008) A Towering Economic To-Do List for Obama, 6 November, Available <http://www.nytimes.com/2008/11/06/business/06challenges.html>, Last accessed 5 January 2011.

New York Times Editorial Board (2009) Tangled Trade Talks, 11 July, Available <http://www.nytimes.com/2009/07/11/opinion/11sat1.html>, Last accessed 5 January 2011.

Newell, P. (2005/6) Climate for Change: Civil society and the politics of global warming In *(ed.)* Glasius, M., Kaldor, M. & Anheier, H., Global Civil Society Yearbook (London: SAGE).

Next 10 (2008) California Green Innovation Index, Palo Alto, CA, Available <http://www.next10.org/environment/greenInnovation.html>, Last accessed 5 January 2011.

Niemiec, C. P., Ryan, R. M., Deci, E. L., & Williams, G. C. (2009) Aspiring to physical health: The role of aspirations for physical health in facilitating long-term tobacco abstinence, *Patient Education and Counseling*, Vol. **74**, pp. 250-257.

Nisbet, M. & Mooney, C. (2007) Framing Science, *Science*, Vol. **316**, p. 56.

Nkrumah, K. (1965) Neo-Colonialism, The Last Stage of Imperialism (London: Thomas Nelson & Sons)

Nobel Prize (1995) The Nobel Prize in Chemistry, Press Release, Stockholm, 11 October.

Nordhaus, T. & Shellenberger, M. (2004) The Death of Environmentalism: Global Warming Politics in a Post-Environmental World, Available http://thebreakthrough.org/PDF/Death_of_Environmentalism.pdf>, Last accessed 30 March 2009.

Norwegian Ministry of Local Government and Regional Development (2003) Facts & Figures: The Sámi people, Available <http://www.norway.org.uk/facts/sami/sami/sami.htm>, Last accessed 12 June 2009.

Notes from Nowhere (2003) We Are Everywhere: the irresistible rise of global anti-capitalism (London: Verso).

Novack, J. (2010) The Very Rich Are Different:They Pay A Lower Tax Rate, Available <http://blogs.forbes.com/janetnovack/2010/09/23/the-very-rich-are-different-they-pay-a-lower-tax-rate/>, Last accessed 5 February 2011.

NOW (2005) Politics & Economy – Corporate Rights, *Public Broadcast System*, 18 February Available <http://www.pbs.org/now/politics/corprights.html>, Last accessed 5 January 2011.

Nowell, A. (2010) Defining Behavioral Modernity in the Context of Neandertal and Anatomically Modern Human Populations, *Annual Review of Anthropology*, Vol. **39**, pp. 437-452.

NRC Handelsblad (2009) Waardeert u de democratie en vrije markt nog wel?, Blog, 10 November, Available <http://weblogs.nrc.nl/discussie/2009/11/10/waardeert-u-de-democratie-en-vrije-markt-nog-wel/>, Last accessed 3 February 2011.

O'Brien, J. & Kollock, P. (2001) The Production of Reality: Essays and Readings on Social Interaction (Thousand Oaks, CA: Pine Forge Press), 3rd edition.

Obach, B.K. (2004) Labor and the Environmental Movement: The Quest for Common Ground (Cambridge: MIT Press).

Obadina (2000) The myth of Neo-colonialism, *Africa Economic Analysis*, Available www.afbis.com/analysis/neo-colonialism.html>, Last accessed 2 April 2009.

Obama for America (2007) Barack Obama and Joe Biden: Promoting a Healthy Environment, Available <http://energy.gov/sites/prod/files/edg/media/Obama_Cap_and_Trade_0512.pdf>, Last accessed 25 September 2015.

Obama for America (2008) Barack Obama and Joe Biden: New Energy For America, Available <http://energy.gov/sites/prod/files/edg/media/Obama_New_Energy_0804.pdf>, Last accessed 25 September 2015.

Office of Management and Budget (2009) A New Era of Responsibility, Washington, D.C., February.

Oliver, M. B. (1994) Portrayals of crime, race, and aggression in "reality-based" police shows: A content analysis, *Journal of Broadcasting & Electronic Media*, Vol. **38 (**2), pp. 119-192.

Ong, E. & Glantz, S. (2000) Tobacco industry efforts subverting International Agency for Research on Cancer's second-hand smoke study, *Lancet*, Vol. 355, pp. 1253–1259.

Oreskes, N. (2004) Beyond the Ivory Tower: The Scientific Consensus on Climate Change, *Science*, Vol. **306** (5702), p. 1686.

Organization for Economic Cooperation and Development (2001) Engaging Citzens in Policy-Making, July, Available <http://www.oecd.org/dataoecd/24/34/2384040.pdf>, Last accessed 5 January 2011.

Özdemir, I. (1997) The Ethical Dimension of Human Attitude Towards Nature (Ankara: Ministry of Environment).

Pacala, S. & Socolow, R. (2004) Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies, *Science*, Vol. **305**, p. 968.

Paley, W. (1809) Natural Theology: or, Evidences of the Existence and Attributes of the Deity (London: J. Faulder), 12th edition.

Palmer, G. B., (1996) Toward a theory of cultural linguistics (Austin: University of Texas Press).

Parikh, J. & Parikh, K. (2002) Climate Change: India's Perceptions, Positions, Policies And Possibilities, *Indira Gandhi Institute of Development Research*, Climate Change and Development Report, *Organization for Economic Cooperation and Development*.

Parsons, T. & Smelser, N. (1956) Economy and society : a study in the integration of economic and social theory (London: Routledge).

Patel, R. (2008) Stuffed and Starved: The Hidden Battle for the World Food System (Brooklyn: Melville House)

PBS (2000) The Great Law as a Model for U.S. Democracy, Teaching Module from the Warrior in Two Worlds Series, Public Broadcast System, Available <http://www.pbs.org/warrior/content/modules/great.pdf>, Last accessed 11 July 2009.

Pepper, D. (1993) Eco-Socialism: From Deep Ecology to Social Justice (London: Routledge).

Perkins, J. (2003) Christopher Stone and the Evolution of Environmental Justice (Princeton, NJ: Princeton Independent).

Pesic, P. (1999) Wrestling with Proteus: Francis Bacon and the "Torture" of Nature, *Isis*, Vol. **90**, (1), pp. 81-94.

Peters, G. (1998) Comparative Politics: Theory and Methods (London: Palgrave Macmillan).

Peterson, C. & Seligman, M. (2004) Character Strengths and Virtues: A Handbook and Classification (New York: Oxford University Press USA).

Peterson, K. (1992) Recent Intellectual Property Trends in Developing Countries, *Harvard International Law Review,* Vol. **33**, pp. 277-290.

Pew Center on Global Climate Change (2009) A Roadmap for U.S.-China Cooperation on Energy and Climate Change: Common Challenge, Collabo-

rative Response: A Roadmap for U.S.-China Cooperation on Energy and Climate Change, February

Pew Charitable Trusts (2010) Who's Winning The Clean Energy Race? Growth, Competition and Opportunity in the World's Largest Economies, March.

Pew Forum (2004) Religion & Public Life Survey Reports: Religion and the Environment, Washington.

Pew Research Center (2007a) 47-Nation Pew Global Attitudes Survey: Global Unease With Major World Powers, 27 June.

Pew Research Centre (2007b) Global Warming: A Divide on Causes and Solutions: Public Views Unchanged by Unusual Weather, 24 January.

Pew Research Center (2009a) Economy, Jobs Trump All Other Policy Priorities: Environment, Immigration, Health Care Slip Down the List, 22 January.

Pew Research Center (2009b) Two Decades After the Wall's Fall: End Of Communism Cheered But Now With More Reservations, November.

Pew Research Center (2011) Angry Silents, Disengaged Millennials: The Generation Gap and the 2012 Election, 3 November.

Pfund, N. and Healey, B. (2011) What Would Jefferson Do? The Historical Role of Federal Subsidies in Shaping America's Energy Future, DBL Investors, Available http://www.dblinvestors.com/documents/What-Would-Jefferson-Do-Final-Version.pdf, Last accessed 10 February 2014.

Piller, C. (2007) Money clashes with mission: The Gates Foundation invests heavily in sub-prime lenders and other businesses that undercut its good works, *Los Angeles Times*, January 8, Available <http://www.latimes.com/business/la-na-gates8jan8,0,1783208.story>, Last accessed 5 January 2011.

Pinker, S. (2002) The Blank Slate: The Modern Denial of Human Nature (New York: Penguin Books).

Pinker, S. (2008) The Moral Instinct, *New York Times*, 13 January, Available <http://www.nytimes.com/2008/01/13/magazine/13Psychology-t.html>, Last accessed 5 January 2011.

Pirages D.C. & Ehrlich P.R. (1974) Ark II: Social Response to Environmental Imperatives (San Francisco: W.H. Freeman and Company).

Polaski, S. (2005) Winners and Losers: Impact of the Doha Round on Developing Countries, Report, *Carnegie Endowment*, March.

Pollan, M. (2006) The Omnivore's Dilemma: A Natural History of Four Meals (London: Bloomsbury Publishing), 2nd Edition.

Pollan, M. (2008) In Defense of Food: An Eater's Manifesto (New York: Penguin), 2nd Edition.

Pollan, M. (2009a) A food revolution in the making from Victory Gardens to White House Lawn, *OnEarth*, National Resources Defense Council, 20 April.

Pollan, M. (2009b) *In Defense of Food*, Presentation, John Adams Institute, Amsterdam, 11 February.

Pollitt, C. (2008) Time, Policy, Management: Governing with the Past (Oxford: Oxford University Press).

Pope Francis (2014) World Day Of Peace: Fraternity, The Foundation And Pathway To Peace, 1 January.

Pope John Paul II (1990) The Ecological Crisis: A Common Responsibility (Washington, D.C.: United States Conference of Catholic Bishops), no. 6.

Popper, K. (1963) Conjectures and Refutations (London: Routledge).

Porter, G., Brown, J. & Chasek, P. (2000) Global environmental politics (Boulder: Westview Press).

Poster, W.R. (2007) Who's On the Line? Indian Call Center Agents: Pose as Americans for U.S.-Outsourced Firms, *Industrial Relations*, Vol. **46** (2), pp. 271-304.

Primack, B., Swanier, B., Georgiopoulos, A. Land, S. & Fine, M. (2009) Association Between Media Use in Adolescence and Depression in Young Adulthood, *Archives of General Psychiatry*, Vol. **66** (2): 181-188.

Public Policy Institute of California (2010) Californians & the Environment, San Francisco, July.

Rahman, A. (1998) Malaysian Laws on Apostasy Inadequate, Belfast Islamic Centre (BIC) News, Belfast, 4 February, Available <http://www.iol.ie/~afifi/BICNews/Afaiz/afaiz18.htm>, Last accessed 5 January 2011.

Rahman, F. (1980) Major themes of the Qur'ān (Chicago: Bibliotheca Islamica).

Raiser, K. (2001) Concluding Remarks, Beyond 11 September: Implications for the Churches Conference, Geneva, 2 December.

Ramonet, I. (1995) La pensée unique, *Le Monde Diplomatique*, January, Available <http://www.monde-diplomatique.fr/1995/01/RAMONET/1144>, Last accessed 5 January 2011.

Ramonet, I. (2002) The other axis of evil, *Le Monde Diplomatique – English Edition*, March (*trans.*) Sandford, L., Available <http://mondediplo.com/2002/03/01axis>, Last accessed 5 January 2011.

Rampell, C. (2009) Savings Rates Rising Toward Mediocrity, *New York Times*, 26 June, Available <http://economix.blogs.nytimes.com/2009/06/26/savings-rates-rising-toward-mediocrity/>, Last accessed 5 January 2011.

Redford, K. & Sanjayan, M.A. (2003) Retiring Cassandra, *Conservation biology* Vol. **17**, (6), pp. 1473-1474.

Reuters (2008a) Crunch may spur rethink of nature as 'free', 21 October, Available <http://www.reuters.com/article/idUSLK28524>, Last accessed 5 January 2011.

Reuters (2008b) Multinationals Fight Climate Change, *New York Times*, 21 January, Available <http://www.nytimes.com/2008/01/21/business/21-green.html>, Last accessed 5 January 2011.

Reuters (2008c) Small farms best for environment: Organic Group, 21 June, Available <http://in.reuters.com/article/idINL1962261720080620>, Last accessed 5 January 2011.

Reuters (2009a) Investment banks in carbon trading, 14 September, Available <http://www.reuters.com/article/idUSTRE58D3MH20090914?sp=true>, Last accessed 5 January 2011.

Reuters (2009b) Recession, Health Concerns Get Americans Gardening, 23 April, Available <http://www.reuters.com/article/idUS-TRE53N03K20090424>, Last accessed 5 January 2011.

Revkin, A. (2007) Challenges to Both Left and Right on Global Warming, *New York Times Book Review,* 13 November, Available <http://www.nytimes.com/2007/11/13/science/earth/13book.html>, Last accessed 5 January 2011.

Revkin, A. (2009) Industry Ignored Its Scientists on Climate, NY Times, 24 April, Available <http://www.nytimes.com/2009/04/24/science/earth/24deny.html?scp=1&sq=Industry%20Ignored%20Its%20Scientists%20on%20Climate&st=cse>, Last accessed 5 January 2011.

Ridgeway, J. (2008) Scrubbing King Coal, *Mother Jones*, 1 May, Available <http://motherjones.com/environment/2008/05/scrubbing-king-coal>, Last accessed 5 January 2011.

Rijksinstituut voor Volksgezondheid en Milieu (2004) Duurzame kwaliteit van leven: een kwestie van kiezen, Available <http://www.rivm.nl/pers-

berichten/2004/duurzaamheidsverkenning.jsp>, Last accessed 15 December 2007.

Rittel, H. & Webber, M. (1973) Dilemmas in a general theory of planning, *Policy Sciences*, Vol. **4**, pp. 155–169.

Robert, J.H. (2010) Religious reactions to Darwin In Harrison, P. (*ed.*), The Cambridge Companion to Science and Religion. Cambridge University Press (2010), pp. 80-102.

Robinson, A, Robinson, N, and Soon, W. (2007) Environmental Effects of Increased Atmospheric Carbon Dioxide, *Journal of American Physicians and Surgeons*, Vol. **12**, pp. 79-90.

Rogers, E. M. (1964). Diffusion of Innovations (Glencoe, IL USA: Free Press).

Rojas, C.E. (1997) Discourses Of The Environment In the Northern Expansion of Santafé de Bogotá, Master Thesis, University of Cincinnati, Available <https://etd.ohiolink.edu/!etd.send_file?accession=ucin996857972&disposition=inline>, Last accessed 1 October 2015.

Ropers, N. (2004) From Resolution to Transformation: The Role of Dialogue Projects, Berghof Research Center for Constructive Conflict Management, Available <http://www.berghof-handbook.net/documents/publications/ropers_handbook.pdf>, Last accessed 5 January 2011.

Rosenthal, E. (2007) Vatican Penance: Forgive Us Our Carbon Output *New York Times*, 17 September, Available <http://www.nytimes.com/2007/09/17/world/europe/17carbon.html>, Last accessed 5 January 2011.

Rosenthal, E. (2008) As More Eat Meat, a Bid to Cut Emissions *New York Times*, 4 December Available <http://www.nytimes.com/2008/12/04/science/earth/04meat.html>, Last accessed 5 January 2011.

Rosteck, T. & Frentz, T.S. (2009) Myth and Multiple Readings in Environmental Rhetoric: The Case of An Inconvenient Truth, *Quarterly Journal of Speech*, Vol. **95 (**1), pp. 1 – 19.

Rothkopf, D. (1997) In Praise of Cultural Imperialism?, *Foreign Policy*, Vol. **107**, pp. 38-53.

Rothkopf, D. (2008) 9/11 Was Big. This Is Bigger, *Washington Post*, 5 October.

Royal Academy of Science (2006) Letter to Exxon Mobil, 4 September, Available http://image.guardian.co.uk/sys-files/Guardian/documents/2006/09/19/LettertoNick.pdf>, Last accessed 13 July 2009.

Rudin, M. (2006) The Science of Happiness, Series producer, The Happiness Formula, British Broadcast Corporation, 30 April, Available http://news.b-

bc.co.uk/2/hi/programmes/happiness_formula/4783836.stm>, Last accessed 5 January 2011.

Ruijter, A. de (2004) Reflections on Cultural Diversity and Cultural Diversity Policies, Comments on Prof. Maddy Janssens, Session I: Theorizing Cultural Diversity And Cultural Diversity Policy, Psychoanalytic Institute for Social Research Conference on Multicultural Cities: Diversity, Growth and Sustainable Development, Rome, 18 November, Available <http://siti.feem.it/engime/content/directory-of-documents/ws/presentazioni/DeRuijter.pdf>, Last accessed 5 January 2011.

Ruse, M. (2010) Atheism, Naturalism and Science: Three in One? In Peter Harrison (*ed.*), The Cambridge Companion to Science and Religion. Cambridge University Press (2010), pp. 229-243.

Saad, L. (2013) Majority believe global warming is happening, but many still say it's exaggerated, *GALLOP Poll*, 8April, http://www.gallup.com/poll/161645/americans-concerns-global-warming-rise.aspx, Last accessed 26 April 2013.

Sachs, J. (2005) The End of Poverty (New York: Penguin Press).

Sachs, W. (1999) Planet Dialectics: Explorations in Environment and Development (New York: St. Martin's Press).

Sajid, A. (2004) Islam and the Middle Way, *For A Change*, Initiatives of Change, Available <http://www.forachange.co.uk/browse/?id=1933&print=1>, Last accessed 5 January 2011.

Salamon, L. & Anheier, H. (1992) In search of the non-profit sector. I: The question of definitions, *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, Vol. **3** (2) pp. 125-151.

Saloojee, Y. & Dagli, E. (2000) Tobacco industry tactics for resisting public policy on health, *Bulletin of the World Health Organization*, Vol. **78** (7), pp. 902-910.

Santoro, L. (2001) Magical Romance, *Blog*, Available <http://imdb.com/title/tt0190332/usercomments>, Last accessed 3 December 2010.

Sapolsky (2005) Are the Desert People Winning, *Discover,* Vol. **26** (8), pp. 38–41.

Sarbin, T. & Kitsuse (1994) Constructing the Social (Inquiries in Social Construction Series), (London: Sage Publications).

Savage, J. (2004.) Does viewing violent media really cause criminal violence? A methodological review. *Aggression and Violent Behavior*, Vol. **10**, pp. 99-128.

Scelfo, J. (2009) The Makeover Moment, *New York Times*, 23 April, Available <http://www.nytimes.com/2009/04/23/garden/23renovation.html>, Last accessed 5 January 2011.

Schaffner, A. (2008) National Security vs. Whales, *Sea Grant Law and Policy Journal,* Vol. **1** (2), pp. 82-96.

Scherer, A. (2004) The Godly Must Be Crazy, *Grist.org*, 27 October, Available <http://www.grist.org/article/scherer-christian/>, Last accessed 5 January 2011.

Scherer, R. (2007) Wall Street adds climate change to bottom line, *Christian Science Monitor*, 27 February, Available <http://www.csmonitor.com/2007/0227/p01s02-usec.html>, Last accessed 5 January 2011.

Schlinger, H (2005) How the human got its mind: Debunking the last great myth in psychology, *Skeptic*, Spring.

Schlosser, E. (2001) Fast Food Nation (New York: Houghton Mifflin).

Schmitt, R. (2005) Systematic Metaphor Analysis as a Method of Qualitative Research, *The Qualitative Report*, Vol. **10**, pp. 358-94.

Schweitzer, A. (1936) The Ethics of Reverence for Life, *Christendom*, Vol. **1**, pp. 225-239.

Schweitzer, A. (1952) *The Problem of Peace*, Nobel Peace Prize Lecture, Stockholm, 4 November.

Search for Common Ground (2006) *Language Communicating, Educating and Entertaining for Conflict Transformation*, Lecture, Culture, Identity, Violence Seminar Series, Universiteit van Amsterdam, Amsterdam.

Seligman, M.E., Steen, T.A., Park N, and Peterson C. (2005) Positive psychology progress: empirical validation of interventions, *American Psychologist*, Vol. **60** (5), pp. 410-421.

Selmore (2007) Coca-Cola Classic 4 Pack Case Retrieved from http://www.selmore.nl/#/casesofinterest/cocacolaclassic/cocacola4pack/.

Sen, A. (1999) Democracy as a Universal Value, *Journal of Democracy* Vol. **10** (3), pp. 3-17.

Sen, A. (2005) India: Large and Small in *The Argumentative Indian* (New York: Farrar, Straus and Giroux).

Sen, A. (2006) Identity and Violence: The Illusion of Destiny (New York: W.W. Norton).

Seyfang, G. (2005) Shopping for Sustainability: Can Sustainable Consumption Promote Ecological Citizenship? *Environmental Politics,* Vol. **14** (2), pp. 290 – 306.

Sheldon, K. M., Ryan, R. M., Deci, E. L., & Kasser, T. (2004) The independent effects of Goal Contents and Motives on Well-Being: It's both what you pursue and why you pursue it, *Personality and Social Psychology Bulletin*, Vol. **30**, pp. 475-486.

Shell (2005) Shell Global Scenarios to 2025, Executive Summary and Excerpts, Shell International Limited, The Hague.

Shell and Financieele Dagblad (FD) Intelligence (2007a) CO2 Probleem of Uitdaging, Public Debate, Financieele Dagblad and Shell, The Hague, 28 June, <http://www.energysquare.nl/events/event.aspx?id=10>, Last accessed 6 January 2011.

Shell and Financieele Dagblad (FD) Intelligence (2007b) Introductie Duurzaam Energie, Public Debate, Financieele Dagblad and Shell, The Hague, 20 September, <http://www.energysquare.nl/events/event.aspx?id=11>, Last accessed 6 January 2011.

Shiva, V. (1992) The Seed and the Earth: Biotechnology and the Colonisation of Regeneration, *Development Dialogue: Women, Ecology and Health: Rebuilding Connections*, Vol. **1-2**, pp. 151-68.

Shiva, V. (1993) The Greening of the Global Reach *(ed.)* Sachs, W., *Global Ecology*, pp. 149-56.

Shorto, R. (2005) The Island at the Center of the World (New York: Vintage).

Signitzer, B. & Prexl, A. (2007) Communication Strategies of 'Greenwash Trackers': How Activist Groups Attempt To Hold Companies Accountable And To Promote Sustainable Development, Presentation at IAMCR Working Group on Environmental Issues, Science and Risk Communication, Paris, 23 July.

Singer, M. (1987) Intercultural Communication: A Perceptual Approach (Upper Saddle River, NJ USA: Prentice Hall College Division).

Singer, M. (1988) Perception & Identity in Intercultural Communication (Boston: Intercultural Press).

Singer, M. (2000) The Role of Culture and Perception in Communication, In (ed) Weaver, G., *Culture, Communication and Conflict: Readings in Intercultural Relations* (Boston: Pearson Publishing), pp. 28-53.

Singer, P. (1989) All Animals Are Equal In *(eds.)*Regan, T. & Singer, P., *Animal Rights and Human Obligations* (New Jersey: Prentice-Hall), pp. 148-162.

Sinha, R. Cross, A., Graubard, B., Leitzmann, M. & Schatzkin, A. (2009) Meat Intake and Mortality: A Prospective Study of Over Half a Million People, *Archives of Internal Medicine*, Vol. **169** (6), pp. 562-571.

Skoll Global Threats Fund (2013) Taking Stock: U.S. Climate Engagement, February.

Sleeth, M. (2006) The Greening of the Faithful (*host*) Wildesmith, S., Wild Side News Radio Show, 19 October.

Sloboda, J. (1991) Music Structure and Emotional Response: Some Empirical Findings, *Psychology of Music*, Vol. **19** (2), pp. 110-120.

Smith, A. (1776 (1835)) An inquiry into the nature and causes of the wealth of nations (*ed.*) Wakefield, E.G. (London: Charles Knight and Co.).

Smith, A. & Mackinnon, J.B. (2007) The 100-Mile Diet: A Year of Local Eating (Toronto: Random House Canada).

Smith, C. (1995) *The Development of Sami Rights since 1980*, Conference Proceedings, Indigenous Politics and Self-Government: Becoming Visible – Indigenous Politics and Self-Government, University of Tromsø, Centre for Sámi Studies, Tromsø, Norway, 8-10 November 1993, *(eds.)* Brantenberg, T., Hansen, J., and Minde, H, Available <http://www.sami.uit.no/girji/n02/en/105smith.html>, Last accessed 6 January 2011.

Smith, C. (2008) Climate scientist claims Stephen Harper's government has muzzled experts, Available <http://www.straight.com/print/163372?#>, Last accessed 16 October 2008, 25 September.

Smith, H. (1958) The World's Religions: Our Great Wisdom Traditions (HarperSanFrancisco), 2nd Edition.

Snow, D. A. (2004) Framing Processes, Ideologies, and Discursive Fields In (*eds.*) Snow, D. A., Soule, S. A., and Kriesi, H., *The Blackwell companion to social movements* (Malden, MA USA: Blackwell).

Snow, D. A., & Benford, R. D. (1988) Ideology, Frame Resonance, and Participant Mobilization, *International Social Movement Research*. Vol. **1**, pp. 197-218.

Snow, D. A., & Benford, R. D. (2000) Framing Processes and Social Movements: An Overview and Assessment, *Annual Review of Sociology*, Vol. **26**, pp. 611-639.

Snow, D. A., Rochford, E. B., Worden, S. K., & Benford, R. D. (1986) Frame alignment processes, micromobilization, and movement participation, *American Sociological Review*, Vol. **51**, pp. 464–481.

Soraghan, M. (2009) Centrist Dems unite to fight left on health, *The Hill*, 17 June, Available <http://thehill.com/homenews/house/47175-centrist-dems-unite-to-fight-left-on-health>, Last accessed 6 January 2011.

Soros, G. (1998) The Crisis of Global Capitalism: Open Society Endangered (New York: Public Affairs).

Southern Baptist Environment and Climate Initiative (2008) Declaration, 10 March, Available <http://www.baptistcreationcare.org/node/1>, Last accessed 6 January 2011.

Southern California Public Radio (2010) Fixing California's budget: tax the rich?, Available <http://www.scpr.org/programs/airtalk/2010/04/08/fixing-californias-budget-tax-the-rich/>, Last accessed 6 February 2011.

Spencer, H. (1873) The Study of Sociology (London: Henry S. King).

Spratt, D. & P. Sutton (2007) Climate Code Red: The Case For A Sustainability Emergency (Fitzroy, VIC, Australia: Friends of the Earth).

Spronk, R. (2007) *Media and the fashioning of romantic love in Nairobi*, Presentation, Mobility Conference, Universiteit van Amsterdam, Amsterdam, 25 January.

Stanton, G. H. (1998) The 8 Stages of Genocide, Available www.genocidewatch.org/images/8StagesBriefingpaper.pdf>, Last accessed 5 November 2009.

Steadman, D. W. (1989) Extinction of Birds in Eastern Polynesia: A Review of the Record, and Comparisons with Other Pacific Island Groups, *Journal of Archaeological Science*, Vol. **16** (2), pp. 177-205.

Steg, L. & Sievers, I. (2000) Cultural Theory and Individual Perceptions of Environmental Risks, *Environment and Behavior,* Vol. **32**, p. 250-269.

Steiner, K. (2005) 'Asian Values': Challenging the paradigms of international human rights?, Presentation, *Berlin Roundtables on Transnationality: Reframing Human Rights*, Irmgard Coninx Foundation and Social Science Research Centre, Humboldt University, Berlin, 3-6 October.

Steiner, K. (2006) Islam, Secularism and Human Rights: A Case Study of Freedom of Religion in Malaysia, Presentation, *Berlin Roundtables on Transnationality: Reframing Human Rights*, Irmgard Coninx Foundation and Social Science Research Centre, Humboldt University, Berlin, 17-18 May.

Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M., and de Haan, C. (2006) Livestock's Long Shadow: Environmental Issues and Options, *Food and Agriculture Organization of the United Nations*, Rome.

Stenmark, M. (2010) Ways of relating science and religion In Peter Harrison (*ed.*), The Cambridge Companion to Science and Religion. Cambridge University Press (2010), pp. 278-295.

Stephanson, A. (1995) Manifest Destiny: American Expansion and the Empire of Right (New York: Hill and Wang).

Sterling E. & Sterling T. (1983) The impact of different ventilation levels and fluorescent lighting types on building illness: an experimental study, *Canadian Journal of Public Health*, Vol. **74**, pp. 385-392.

Stern, N. (2006) The Economics of Climate Change, Cabinet Office: British Treasury Report to the Prime Minister and the Chancellor of the Exchequer, Available <http://www.hm-treasury.gov.uk/stern_review_final_report.htm>, Last accessed 25 November 2008.

Stern, N. (2007) Bali: now the rich must pay: A fair and global effort to tackle climate change needs wealthy states to take the lead in CO2 cuts, *The Guardian*, 30 November, Available <http://www.guardian.co.uk/commentisfree/2007/nov/30/comment.climatechange>, Last accessed 6 January 2011.

Stern, N. (2009) *Plenary*, Presentation at CLIMATE CHANGE: Global Risks, Challenges & Decisions Conference, Copenhagen, 12 March.

Stevenson, G.R. (2000) Trade Secrets: The Secret To Protecting Indigenous Ethnobiological (Medicinal) Knowledge, *Journal of International Law and Politics*, Vol. **32**, p 1119 – 1174.

Stiglitz, J. (2002) Globalization and Its Discontents (New York: W. W. Norton).

Sukhdev, P. (2008) The Economics of Ecosystems and Biodiversity (TEEB) – An Interim Report, Conference of Parties (COP) Briefing, High-Level Segment of the Ninth Conference of the Parties to the Convention on Biological Diversity, Bonn, May.

Sullivan, K. (2007) $25 Million Offered In Climate Challenge: Tycoon Hopes to Spur Milestone Research, *Washington Post*, 10 February, Available <http://www.washingtonpost.com/wp-dyn/content/article/2007/02/09/AR2007020900693.html>, Last accessed 6 January 2011.

Susman, T. (2010) New York schools' ban on homemade goods at bake sales has parents steamed, *New York Times*, 21 March, Available <http://articles.latimes.com/2010/mar/21/nation/la-na-hometown-new-york21-2010mar21>, Last accessed 4 January 2011.

Sylvan, R. & Bennett, D. (1988) Taoism and Deep Ecology, *Ecologist*, Vol. **18** (4/5), pp. 148-159.

Sylvester-Bradley, O. (2004) Encouraging Environmentally Responsible Behaviour, Master Thesis, University of East London.

Tauli-Corpuz, V. (2006) Our Right to Remain Separate and Distinct In *(eds.)* Mander, J. & Tauli-Corpuz, V. Paradigm Wars: Indigenous Peoples' Resistance to Globalization (San Francisco: Sierra Club Books), pp 13-22.

Taylor, B. (2000) Bioregionalism: An Ethics of Loyalty to Place, *Landscape Journal*, Vol. **19** (1 & 2), pp. 50-72.

Taylor, B. (2001a) Earth and Nature-Based Spirituality (Part I): From Deep Ecology to Radical Environmentalism, *Religion*, Vol. **31**, pp. 175–193.

Taylor, B. (2001b) Earth and Nature-Based Spirituality (Part II): From Earth First! and Bioregionalism to Scientific Paganism and the New Age, *Religion*, Vol. **31**, pp. 225–245.

Tellegen, E. & Wolsink, M. (1998) Society and Its Environment: An Introduction (New York: Routledge).

Tesch, R. (1990) Qualitative Research: Analysis Types and Software Tools (London: Routledge – Falmer).

Tetzeli, R. (2009) The Lessons of Adversity, *Fortune Magazine*, 21 April, Available <http://money.cnn.com/2009/04/16/news/companies/tetzeli_adversity.fortune/index.htm?section=money_latest&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+rss%2Fmoney_latest+%28Latest+News%29>, Last accessed 4 January 2011..

Textor, R. (1967) A Cross-Cultural Summary (New Haven, CT USA: Human Relations Area Files Press).

Thackara, J. (2007) Being There, But Not, With Nevejan, Report, *Doors of Perception*, April.

Thakkar, S. (2008) The Knitting Lesson, *Women's Studies Quarterly* Vol. **36**, (1-2) pp. 174-180.

Tharoor, S. (1999/2000) Are Human Rights Universal? *World Policy Journal*, Vol. **XVI** (4), pp. 1-6.

The CNA Corporation (2007) National Security and the Threat of Climate Change. Available <http://www.npr.org/documents/2007/apr/security_climate.pdf>, Last Accessed 24 September 2015.

The Economist (1986) Nigeria survey, 3 May, *The Economist Group.*

The Economist (2009) A giant falls, 4 June, Available <http://www.economist.com/node/13782942>, Last accessed 15 December 2010.

The Economist (2010) Government Motors no more, 14 August, Available http://www.economist.com/node/16846494>, Last accessed 15 December 2010.

The Telegraph (2009a) Climate change scientists face calls for public inquiry over data manipulation claims, 25 November, Available <http://www.telegraph.co.uk/earth/environment/globalwarming/6637006/ Climate–change–scientists–face–calls–for–public–inquiry–over–data–manipulation–claims.html>, Last accessed 31 January 2011.

The Telegraph (2009b) University of East Anglia emails: the most contentious quotes, 23 November, Available <http://www.telegraph.co.uk/earth/environment/globalwarming/6636563/University-of-East-Anglia-emails-the-most-contentious-quotes.html>, Last accessed 31 January 2011.

Theroux, D. (2009) Obama's FDA: Cheerios Are a "Drug" and Can't Make Health Claims, *The Independent Institute*, 12 May, Available <http://www.independent.org/blog/index.php?p=2154>, Last accessed 4 January 2011.

Thimm, J. (2007) American Exceptionalism – Conceptual Thoughts and Empirical Evidence, Conference Paper, Tagung der Nachwuchsgruppe "Internationale Politik" der DVPW *Stiftung Wissenschaft und Politik*, Darmstadt, Germany, 13 July.

Thye, S.R. & Lawler, E.J. (2006) *Social Psychology of the Workplace*, Advances in Group Processes, Vol. 23 (Oxford, UK: Elsevier JAI Press).

Tilly, C. (2006) Why? (Princeton, NJ USA: Princeton Press).

Tokar, B. (1997) Earth for Sale: Reclaiming Ecology in the Age of Corporate Greenwash (Cambridge: South End Press).

Toledo, V.M. (2001) Biodiversity and Indigenous Peoples, In *(ed.)* Levin, S. *Encyclopedia of Biodiversity* (San Diego: Academic Press), pp. 330–340.

Tomek, V. (2006) Zoroastrian Responses to Environmental Concerns, Ontario Consultants on Religious Tolerance, 27 August, Available <http://www.religioustolerance.org/tomek15.htm>, Last accessed 10 November 2008.

Tomlinson, J. (1991) Cultural Imperialism: A Critical Introduction (Baltimore: The Johns Hopkins University Press).

Torrance, T.F. (1970) The Problem of Natural Theology in the Thought of Karl Barth, *Religious Studies*, Vol. **6** (2), pp 121-135.

Trueman, C.N.G., Field, J.H., Dortch, J. Charles, B. & Wroe, S. (2005) Prolonged coexistence of humans and megafauna in Pleistocene Australia, *Proceedings of the National Academy of Sciences,* Vol. **102** (23), pp. 8381-8385.

Turner, R. H. (1996) The Moral Issue in Collective Behavior and Collective Action, *Mobilization: An International Quarterly*, Vol. **1**, pp. 1 – 15.

Turner, R. H. & Killian, L. M. (1972) Collective Behavior (Englewood Cliffs, N. J., Prentice-Hall), 2th edition.

U.S. Climate Action Partnership (2007) A Call for Action, Available <http://www.us-cap.org/USCAPCallForAction.pdf>, Last accessed 15 July 2008.

Uhlmann, E.L., Poehlman T.A., Tannenbaum, D., and Bargh, J.A. (2011) Implicit Puritanism in American moral cognition, *Journal of Experimental Social Psychology*, Vol. **47**, pp. 312-320.

Ulloa, A. (2009) *Indigenous peoples of the Sierra Nevada de Santa Marta-Colombia: local ways of thinking climate change*, Presentation at CLIMATE CHANGE: Global Risks, Challenges & Decisions in Panel on Cultures, Values and World Perspectives as Factors in Responding to Climate Change, Copenhagen, 12 March.

Union of Concerned Scientists (2009) Failure to Yield: Evaluating the Performance of Genetically Engineered Crops (*ed.*) D. Gurian-Sherman, April, Available <http://www.ucsusa.org/sites/default/files/legacy/assets/documents/food_and_agriculture/failure-to-yield.pdf>, Last Accessed 8 September 2015.

United Nations (2010) The Millennium Development Goals Report, Available <http://www.un.org/millenniumgoals/pdf/MDG%20Report%202010%20En%20r15%20-low%20res%2020100615%20-.pdf>, Last accessed 8 September 2015.

United Nations Committee on the Rights of the Child (1989) Convention on the Rights of the Child, Article 31, Available <http://www2.ohchr.org/english/law/crc.htm#art31>, Last accessed 6 January 2011.

United Nations Conference on Trade and Development (2012) Investment Policy Framework for Sustainable Development, Available <http://unctad.org/en/PublicationsLibrary/diaepcb2012d5_en.pdf>, Last accessed 8 September 2015.

United Nations Conference on Trade and Development (2013a) Recent Developments in Investor-State Dispute Settlement (ISDS), IIA Issues Note, No. 1.

United Nations Conference on Trade and Development (2013b) Towards a New Generation of International Investment Policies: UNCTAD's Fresh Approach to Multilateral Investment Policy-Making, IIA Issues Note, No. 5.

United Nations Conference on Trade and Development and United Nations Environmental Programme (2008) Organic Agriculture and Food Security in Africa, United Nations Document Number UNCTAD/DITC/TED/2007/15.

United Nations Department of Economic and Social Affairs (2008) The Millennium Development Goals Report 2008, New York, August.

United Nations Development Programme (2004) Human Development Report: Cultural Liberty, New York.

United Nations Economic Commission for Europe (1987) Protocol To The 1979 Convention On Long-Range Transboundary Air Pollution On The Reduction Of Sulphur Emissions Or Their Transboundary Fluxes By At Least 30 Per Cent Available <http://www.unece.org/env/lrtap/full%20text/1985.Sulphur.e.pdf>, Last accessed 7 April 2009.

United Nations Environmental Programme (1972) Declaration of the United Nations Conference on the Human Environment, Stockholm, 5 – 16 June.

United Nations Environmental Programme (1992) Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro, 3 – 14 June.

United Nations Environmental Programme (2007) Scientific Assessment of Ozone Depletion: 2006, Ozone Secretariat, Geneva and Nairobi, March.

United Nations Environmental Programme (2008a) Global Green New Deal: Environmentally-Focused Investment Historic Opportunity for 21st Century Prosperity and Job Generation: UNEP Launches Green Economy Initia-

tive to Get the Global Markets Back to Work, Press Release, London/Nairobi, 22 October.

United Nations Environmental Programme (2008b) Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World, Nairobi, September.

United Nations Framework Convention on Climate Change (1992) United Nations Framework Convention on Climate Change, Available <http://unfccc.int/resource/docs/convkp/conveng.pdf>, Last accessed 25 September 2015.

United Nations Framework Convention on Climate Change (1997) Industrialized countries to cut greenhouse gas emissions by 5.2% Percent By Legally Binding Agreement Reached By Kyoto Climate Change Conference, Kyoto Japan, Press Release ENV/DEV/456, 11 December, Available <http://www.un.org/News/Press/docs/1997/19971211.ENDEV456.html>, Last accessed 7 January 2011.

United Nations Framework Convention on Climate Change (2008) Status of Ratification, 16 October, Available <http://unfccc.int/files/kyoto_protocol/status_of_ratification/application/pdf/kp_ratification.pdf>, Last accessed 25 November 2008.

United Nations Framework Convention on Climate Change (2015) BG Group, BP, Eni, Shell, Statoil, and Total Letter to UNFCCC and President COP21, 29 May, Available <http://newsroom.unfccc.int/unfccc-newsroom/major-oil-companies-letter-to-un/>, Last accessed 10 June 2015.

United Nations General Assembly (1948) Universal Declaration of Human Rights, 10 December.

United Nations General Assembly (1987) Report of the World Commission on Environment and Development: Our Common Future (a.k.a. The Brundtland Report) Published as General Assembly Resolution 42/187, 11 December.

United Nations General Assembly (1993) Vienna Declaration and Programme of Action, Vienna, 12 July.

United Nations General Assembly (2008) Declaration on the Rights of Indigenous Peoples, New York.

United Nations Global Compact (2007a) About Us, Available <http://www.unglobalcompact.org>, Last accessed 9 July 2009.

United Nations Global Compact (2007b) Leaders Summit: Geneva Declaration, 5-6 July, Available <http://www.unglobalcompact.org/docs/summit2007/GENEVA_DECLARATION.pdf>, Last accessed 9 July 2009.

United Nations Global Compact (2007c) The Ten Principles, Available <http://www.unglobalcompact.org/AboutTheGC/TheTenPrinciples>, Last accessed 9 July 2009.

United Nations Global Compact (2010) Communication on Progress, *HELOG*, Available <http://www.unglobalcompact.org/system/attachments/4812/original/roport_on_progress_2010.pdf?1270731665>, Last accessed 5 January 2011.

United Nations News Centre (2008) UN launches new initiative to stimulate 'green' market growth, Available <http://www.un.org/apps/news/story.asp?NewsID=28668#>, Last accessed 8 September 2015.

United Nations Population Division/DESA (2009) World Population To Exceed 9 Billion By 2050, Press Release, 11 March, Available <http://www.un.org/esa/population/publications/wpp2008/pressrelease.pdf>, Last accessed 5 January 2011.

United Nations Secretariat Of The Permanent Forum On Indigenous Issues (2004) Concept Of Indigenous Peoples, *Department Of Economic And Social Affairs, Division For Social Policy And Development*, New York, 19-21 January.

United States Central Intelligence Agency (2011) The World Factbook, Available <https://www.cia.gov/library/publications/the-world-factbook/index.html>, Last accessed 16 January 2011.

United States Conference of Catholic Bishops (2001) Global Climate Change: A Plea for Dialogue, Prudence, and the Common Good, Washington, 15 June, Available <http://www.nccbuscc.org/sdwp/ejp/climate/index.shtml>, Last accessed 7 January 2011.

United States Congress (2002) American Service-Members' Protection Act, 107th Congress, H.R.4775.

United States Department of Agriculture (1943) U.S. Government Campaign to Promote the Production, Sharing and Proper Use of Food: Book IV – The Victory Gardens Campaign, Washington, *U.S. Government Printing Office*, Available http://arcweb.sos.state.or.us/exhibits/ww2/services/pdf/ag1.pdf>, Last accessed 24 April 2009.

United States Department of Defense (2010) Quadrennial Defense Review, http://www.defense.gov/qdr/images/QDR_as_of_12Feb10_1000.pdf, Last accessed April 26, 2013.

United States Environmental Protection Agency (2009) Endangerment and Cause or Contribute: Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule, Available <http://www3.epa.gov/climatechange/Downloads/endangerment/Federal_Register-EPA-HQ-OAR-2009-0171-Dec.15-09.pdf>, Last accessed 29 September 2015.

United States Supreme Court (2008) Winter, Secretary Of The Navy, et al. v Natural Resources Defense Council, Inc., et al., 07–1239.

United States Supreme Court (2010) Winter, Citizens United V. Federal Election Commission, 08–205.

Vaknin, S. (2006) Eastern Europe: Leapfrogging to Cellular, *Global Politician*, Available <http://www.globalpolitician.com/22379-balkans-russia-eastern-europe>, Last accessed 7 January 2011.

Van Ginneken, J. (1998) Understanding Global News: A Critical Introduction (London: Sage Publications Ltd).

Van Ginneken, J. (2003) Collective Behavior and Public Opinion: Rapid Shifts in Opinion and Communication (Mahwah, NJ USA: Lawrence Erlbaum).

Vanity Fair (2006a) The Governors Who Get It, *Vanity Fair*, May, pp. 174-175.

Vanity Fair (2006b) The Men from City Hall, *Vanity Fair*, May, pp. 184-185.

Vázquez Castillo, M.T. (2004) Land Privatization in Mexico: Urbanization, Formation of Regions and Globalization in Ejidos (London: Routledge).

Velasquez-Manoff, M. (2008) Why Your Happiness Matters to the Planet: Surveys and Research Link True Happiness to a Smaller Footprint on the Ecology, *Christian Science Monitor*, 22 July, Available <http://www.csmonitor.com/Environment/Living-Green/2008/0722/why-your-happiness-matters-to-the-planet>, Last accessed 4 January 2011.

Venetoulis, J. & Talberth, J. (2005) Ecological Footprint of Nations: 2005 Update (Oakland: Redefining Progress).

Villar, A. and Krosnick, J.A. (2011) Global warming vs. climate change, taxes vs. prices: Does word choice matter?, *Climatic Change* Vol. **105**, pp. 1–12.

Vlasic, B. (2010) Washington Played a Big Part in G.M. Turnaround, *New York Times*, 2 November, Available <http://www.nytimes.com/2010/11/03/business/03federal.html?scp=4&sq=gm%20stock&st=cse>, Last accessed 24 January 2011.

Vogler, C. (1998) The Writer's Journey: Mythic Structure for Writers (Studio City, CA: Michael Wiese Productions, 2nd Edition.

Vucheva, E. (2008) 'Laissez-faire' capitalism is finished, says France, *EUobserver*, 26 September, Available <http://euobserver.com/9/26814>, Last accessed 4 January 2011.

Wade, N. (2007) Is 'Do Unto Others' Written Into Our Genes?, *New York Times*, 18 September, Available <http://www.nytimes.com/2007/09/18/science/18mora.html>, Last accessed 4 January 2011.

Wadhams, N. (2010) Iceland volcano: Kenya's farmers losing $1.3m a day in flights chaos: 5,000 workers laid off and tonnes of vegetables and flowers dumped as ash cloud engulfs Europe, *The Guardian*, 18 April, Available <http://www.guardian.co.uk/world/2010/apr/18/iceland-volcano-kenya-farmers>, Last accessed 4 January 2011.

Wald, M. (2008) G.M. Buys Stake in Ethanol Made From Waste, *New York Times*, 14 January, Available <http://www.nytimes.com/2008/01/14/business/14gm.html>, Last accessed 4 January 2011.

Walker, C. (2005) The Costs of NAFTA, *Just Change*, 1 August, <http://www.justfocus.org.nz/2005/08/the-costs-of-nafta/>, Last accessed 4 January 2011.

Wallerstein, I. (1974) The Modern World-System (New York: Academic Press).

Wallerstein, I. (2003) Entering Global Anarchy, *New Left Review*, May/June.

Walter, R. (2007) Joseph Campbell Essay (Big Sur, CA USA: Esalen Institute).

Wang, T. & Watson, J. (2007) Who Owns China's Carbon Emissions? , Tyndall Briefing Note No. 23, Sussex Energy Group, SPRU, University of Sussex and Tyndall Centre for Climate Change Research, Brighton, UK, October.

Ward, C. (2009) Too Big to Fail: Ecological Ignorance and Economic Collapse, *Tom Dispatch*, 20 April, Available <http://www.tomdispatch.com/post/175061>, Last accessed 22 April 2009.

Washington Post (2007) Washington Post-ABC News Poll: Environment Trends, 20 April, Available <http://www.washingtonpost.com/wp-srv/nation/polls/postpoll_environment_042007.html>, Last accessed 4 January 2011.

Wasley, A. (2009) Deforestation and the true cost of Europe's cheap meat, *The Guardian*, Available <http://www.guardian.co.uk/environment/2009/oct/16/deforestation-europe-cheap-meat>, Last accessed 4 February 2011.

Watt-Cloutier, S. (2003) Check Against Delivery, Presentation to Conference of Parties to the United Nations Framework Convention on Climate

Change, Milan, 15 December, Available <http://www.inuitcircumpolar.-com/index.php?Lang=EN&ID=282&printable=1&Nav=&Action=&Action2=&Report=&Report_Text=&Record=&Record2=&Record3=&addnew=>, Last accessed 4 January 2011.

Weart, S. (2007) The Discovery of Global Warming Summary, American Institute of Physics Center for History of Physics, Available <http://www.aip.org/history/climate/summary.htm>, Last accessed 10 November 2008.

Weart, S. (2008) The Discovery of Global Warming: The Public and Climate Change (online: American Institute of Physics Center for History of Physics), Available <http://www.aip.org/history/climate/public2.htm>, Last accessed 10 November 2008.

Webb, T. (2009) Shell dumps wind, solar and hydro power in favour of biofuels, The Guardian, 17 March, Available <http://www.guardian.co.uk/business/2009/mar/17/royaldutchshell-energy>, Last accessed 4 January 2011.

Weber, E.U. (2006) Experience-Based And Description-Based Perceptions Of Long-Term Risk: Why Global Warming Does Not Scare Us (Yet), *Climatic Change* Vol. **77**, pp. 103–120.

Weidner, D. (2009) How Traders Killed Value Investing, Wall Street Journal, 11 June, Available <http://online.wsj.com/article/SB124465076778202561.html>, Last accessed 4 January 2011.

Weinstein, N., Przybylski, A. K., & Ryan, R. M. (2009) Can nature make us more caring? effects of immersion in nature on intrinsic aspirations and generosity, *Personality and Social Psychology Bulletin*, Vol. **35**, pp. 1315-1329.

Weiss, K. (2008) U.S. Close To Decision On Polar Bears: It Could Be The First Species To Be Listed As Threatened With Extinction Primarily Because Of Global Warming, *Los Angeles Times*, 3 February, Available <http://www.latimes.com/news/local/la-adme-polar3feb03,0,3590654.story>, Last accessed 5 February 2008.

Wells, N. & Lekies, K. (2006) Nature and the Life Course: Pathways from Childhood Nature Experiences to Adult Environmentalism, *Children, Youth and Environments* Vol. **16** (1), pp. 1 – 24.

West, C. (1993) Prophetic Reflections: Notes on Race and Power in America (Beyond Eurocentrism and Multiculturalism, Volume 2) (Monroe, ME: Common Courage Press).

White, L. (1967) The Historical Roots of Our Ecological Crisis, *Science*, Vol. **155**, pp. 1203-1207.

White House (2007) Major Economies Meeting on Energy Security and Climate Change, Fact Sheet, Washington, 27 September, Available <http://georgewbush-whitehouse.archives.gov/news/releases/2007/09/20070927.html>, Last accessed 4 January 2011.

White House (2009) President Obama Announces Launch of the Major Economies Forum on Energy and Climate, Press Release, Washington, 28 March, Available <http://www.whitehouse.gov/the_press_office/President-Obama-Announces-Launch-of-the-Major-Economies-Forum-on-Energy-and-Climate/>, Last accessed 4 January 2011.

Whiteman, G. (2009) B-Schools - Make Climate Change Front and Center, *Business Week*, 20 April, Available <http://www.businessweek.com/bschools/content/apr2009/bs20090420_269590.htm>, Last accessed 4 January 2011.

Whiting, J. W. M. (1964 (1994)) Effects of Climate on Certain Cultural Practices, In (*ed.*) Chasdi, E. H., *Culture and Human Development: The Selected Papers of John Whiting* (Cambridge: Cambridge University Press), pp. 221-236.

Williams, M. (2002) Deforesting the Earth: From Prehistory to Global Crisis (Chicago: University of Chicago Press).

Wills, K. (2007) The close-knit circle: American knitters today (Westport, Connecticut USA: Greenwood Publishing Group)

Wilson, E.O. (1975) Sociobiology: The New Synthesis (Cambridge: Harvard University Press).

Wilson, E.O. (1978) On Human Nature (Cambridge, MA: Harvard University Press).

Wilson, E.O. (1984) Biophilia (Cambridge, MA: Harvard University Press).

Wilson, E.O. (1999) Consilience: The Unity of Knowledge (New York: First Vintage).

Wilson, E.O. (2006) The Creation: An Appeal to Save Life on Earth (New York: W. W. Norton).

Wilson, J. (1973) Introduction to Social Movements (New York: Basic Books).

Wong and Revkin (2009) Experts in U.S. & China See a Chance for Cooperation Against Climate Change, *New York Times*, 4 February, Available <http://www.nytimes.com/2009/02/05/world/asia/05china.html>, Last accessed 4 January 2011.

Wood, P. (1991) French Thought Under Mitterrand: The Social, Economic and Political Context for the Return of the Subject and Ethics, for the Heidegger Scandal, and for the Demise of the Critical Intellectual, *Contemporary French Civilization*, Vol. **XV** (2), pp. 244-246.

World Bank (2003) Implementation of Operational Directive 4.20 on Indigenous Peoples: An Evaluation of Results, Report No. 25754, 10 April.

World Bank (2011) Population growth (annual %), Available <http://data.worldbank.org/indicator/SP.POP.GROW?cid=GPD_2>, Last accessed 31 January 2011.

World Business Council for Sustainable Development (2007) Doing Business with the World – The New Role of Corporate Leadership in Global Development, October. Available <http://www.wbcsd.org/DocRoot/x2gNb4UoMs9O3LnTifIE/Bizwithworld_LR.pdf>, Last accessed 13 July 2009.

World Business Council for Sustainable Development (2008) Mission Statement, 7 August, Available <http://www.wbcsd.org/templates/TemplateWBCSD5/layout.asp?type=p&MenuId=NjA>, Last accessed 6 January 2011.

World Coal Institute (2010) The Coal Resource: A Comprehensive Overview of Coal, Available <http://www.worldcoal.org/bin/pdf/original_pdf_file/coal_resource_overview_of_coal_report(03_06_2009).pdf>, Last accessed 7 January 2011.

World Commission on Protected Areas (2000) Indigenous and Traditional Peoples and Protected Areas: Principles, Guidelines and Case Studies *(eds.)* Beltrán, J. & Phillips, A., *The World Conservation Union*, Cardiff, UK.

World Intellectual Property Organization (1979) Convention Establishing the World Intellectual Property Organization, Originally signed at Stockholm on July 14, 1967, Amended 28 September, Available <http://www.wipo.int/treaties/en/convention/trtdocs_wo029.html>, Last accessed 5 January 2011.

World Intellectual Property Organization (2001) Intellectual Property Needs And Expectations Of Traditional Knowledge Holders: WIPO Report on Fact-Finding Missions on Intellectual Property and Traditional Knowledge (1998-1999), Geneva, April.

World Intellectual Property Organization (2007a) Registration Opens for WIPO's Executive Program on Strategic Intellectual Property Finance, Press Release, Geneva, 30 July, Available <http://www.wipo.int/pressroom/en/articles/2007/article_0048.html>, Last accessed 5 January 2011.

World Intellectual Property Organization (2007b) Strategic Intellectual Property Management Executive Program, WIPO Academy News, Goa, India, No. 2, December, Available <http://www.wipo.int/academy/en/newsletter/news_2_3.html>, Last accessed 5 January 2011.

World Intellectual Property Organization (2007c) World Intellectual Property Organization: An Overview 2007 Edition, Publication No. 1007E, Geneva.

World Wildlife Fund (2006) Living Planet Report (*eds.*) Zoological Society of London, Global Footprint Network, World Wide Fund For Nature, Gland, Switzerland.

World Wildlife Fund (2008) Weathercocks & Signposts: The Environment Movement at a Crossroads, London.

WorldPublicOpinion.org and Chicago Council on Global Affairs (2007) World Public Opinion: Globalization and Trade, Climate Change, Genocide and Darfur, Future of the United Nations US Leadership, Rise of China, Available <http://www.worldpublicopinion.org/pipa/pdf/jun07/CCGA+_FullReport_rpt.pdf>, Last accessed 24 September 2015.

Yale Project on Climate Change (2010) Americans' Knowledge of Climate Change, 12 October.

Yale Project on Climate Change and the George Mason University Center for Climate Change Communication (2009) Climate Change In The American Mind: Americans' Climate Change Beliefs, Attitudes, Policy Preferences, and Actions, 15 May.

Younkins, E. (2000) Why the World is the Way It Is: Cultural Relativism and It's Descendents, *The Free Radical*, September – October.

Zandonella, C. (2005) If you build it, they will pay, Report, International AIDS Vaccine Initiative (IAVI), Vol. **9** (3), July – August, pp. 13, 18-21.

Zogby (2004) Three Presidents Get My Vote: Who would you rather have a beer with?, Poll, Zogby International, Available <http://www.zogby.com/SoundBites/readclips.cfm?ID=18285>, Last accessed 12 July 2009.

Zogby (2006) Americans Link Hurricane Katrina and Heat Wave to Global Warming, Poll, Zogby International, Available <http://www.zogby.com/News/ReadNews.dbm?ID=1161>, Last accessed 3 December 2007.

Bibliography

Akerlof, G. & Shiller, R. (2009) Animal Spirits: How Human Psychology Drives the Economy and Why It Matters for Global Capitalism (Princeton, NJ USA: Princeton University Press).

Allenby, B. R. (2005) Reconstructing Earth: Technology and Environment in the Age of Humans (Washington, D.C.: Island Press).

American Environics (2006b) Toward a New Ecological Majority: Summary and Overview, Available <http://www.americanenvironics.com/Files_Publications/Road_Map_for_Ecological_Majority_AE.pdf>, Last accessed 7 January 2008.

Arts, B. (1998), The political influence of global NGOs: Case Studies on the Climate and Biodiversity Conventions. (Utrecht: International Books).

Baer, P, Athanasiou, T. Kartha, S. & Kemp-Benedict, E. (2008) The Right to Development in a Climate Constrained World: The Greenhouse Development Rights Framework, EcoEquity, Available <http://gdrights.org/wp-content/uploads/2009/01/thegdrsframework.pdf>, Last accessed 16 December 2010.

Benedict, R., and Weltfish, G, (1943) The Races of Mankind: Public Affairs Pamphlet 85, *Public Affairs Committee*).

Braithwaite, C. (1990) Communicative silence: A cross-cultural study of Basso's hypothesis, in Carbaugh, D. *(ed.)* Cultural communication and intercultural contact (Hillsdale, NJ: Lawrence Erlbaum), p. 321–327.

Carbaugh, D. (1996). Situating selves: The communication of social identity in American scenes (Albany, NY: State University of New York Press).

Confer, J.C., Easton, J.A., Fleischman, D.S., Goetz, C.D., Lewis, D.M.G., Perilloux, C. & Buss, D.M. (2010) Evolutionary Psychology: Controversies, Questions, Prospects, and Limitations, *American Psychologist*, Vol. 65, (2), pp. 110–126.

G8 (2007) Declaration of Leaders Meeting of Major Economies on Energy Security and Climate Change, Available <http://www.unep.fr/ozonaction/

information/mmcfiles/6102-e-G8_Declaration_9July08.pdf>, Last accessed 31 January 2011.

Gable, S. L., and Haidt, J. (2005) What (and why) is positive psychology?, *Review of General Psychology,* Vol. 9, pp. 103-110.

Gertner (2009) Why Isn't the Brain Green?, *New York Times*, 19 April, Available <http://www.nytimes.com/2009/04/19/magazine/19Science-t.html>, Last accessed 16 December 2010.

Graybill, L. S. (2004) Pardon, Punishment, and Amnesia: Three African Post-Conflict Methods. In: Third World Quarterly, Vol. 25 (6), pp. 1117-1130.

Hollender, J. & Fenichell, S. (2004) What Matters Most, Business Social Responsibility and the End of the Era of Greed (London: Random House Business Books).

Kim, J., Glick, J, Moeel, S, Sanchez, L, Economopoulos, B, and Imarisha, W (2001) Another World Is Possible (New Orleans: Subway and Elevated Press).

Kluckhohn, C. (1949) Mirror for Man: The Relation of the Anthropology to Modern Life (New York-Toronto: Whittlesey House).

Lawrence Berkeley Laboratory (1998) Technology and Greenhouse Gas Emissions: An Integrated Scenario Analysis Using the LBNL-NEMS Model, September.

Mander, J. (1972) Ecopornography: One Year and Nearly a Billion Dollars Later, Advertising Owns Ecology, *Communication and Arts Magazine*, Vol. 14 (2), pp. 45-56.

National Geographic Society (2010) Greendex: Consumer Choice and the Environment – A Worldwide Tracking Survey, National Geographic Society, Available http://images.nationalgeographic.com/wpf/media-live/file/GS_NGS_2010GreendexHighlights-cb1275487974.pdf>, Last accessed 4 January 2011.

Peck, J. (1994) Talk about Racism: Framing a Popular Discourse of Race on Oprah Winfrey, *Cultural Critique*, Vol. **27**, pp. 89-126.

Pew Commission on Industrial Farm Animal Production (2008) Putting Meat on the Table: Industrial Farm Animal Production in America, The Pew Charitable Trusts and Johns Hopkins Bloomberg School of Public Health.

Reijnders, L. (2009) Specific Principles in Boersema, J.J., and Reijnders, L. *(eds.)* Principles of Environmental Sciences (Dordrecht: Springer Science and Business Media).

Ricœur, P. (1986) The Rule Of Metaphor: Multi-Disciplinary Studies Of The Creation Of Meaning In Language (*trans*.) Czerny, R., McLaughlin, K., Costello, J. (London: Routledge and Kagan Paul).

Rorty, R. (2000) Universality and Truth In *(ed.)* Brandom, R., Rorty and his Critics (Oxford: Blackwell), pp 1 – 30.

Rosch, E.H. (1975) Cognitive Reference Points, *Cognitive Psychology*, Vol. **7**, pp. 532-547.

Rosch, E.H. & Mervis, C.B. (1981) Categorization of Natural Objects, *Annual Review Psychology* Vol. **32**, pp. 89-115.

Royal Tropical Institute (2004) Het Kwaad, All About Evil (Amsterdam: KIT Publishers).

Sagiv, L., and Schwartz, S. H. (1995). Value priorities and readiness for out groups social contact, *Journal of Personality and Social Psychology* Vol. **69** (3), pp. 437-448.

Schiappa, E. (1998) Constructing Reality Through Definitions: The Politics of Meaning (series editor) Bridwell-Bowles, L. (University of Minnesota, Center for Interdisciplinary Studies of Writing and the Composition, Literacy, and Rhetorical Studies Minor), Speaker Series: 11.

Ting-Toomey, S. & Chung, L. (2005) Understanding Intercultural Communication (Los Angeles: Roxbury Publishing).

United Nations (1983) Economic and Social Council (ECOSOC)'s Sub-Commission on the Prevention of Discrimination and Protection of Minorities Working Group on Indigenous Populations (E/CN.4/Sub.2/1983/21/Add.8, para. 369/).

United Nations (1992) Text of the Convention: United Nations Framework Convention On Climate Change, FCCC/INFORMAL/84 GE.05-62220 (E) 200705, Available <http://unfccc.int/resource/docs/convkp/conveng.pdf, Last accessed 8 February 2011.

Vink, N. (2004) Grenzeloos Communicatie (Amsterdam: KIT Publishers).